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The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2477.—Vol. LIII.

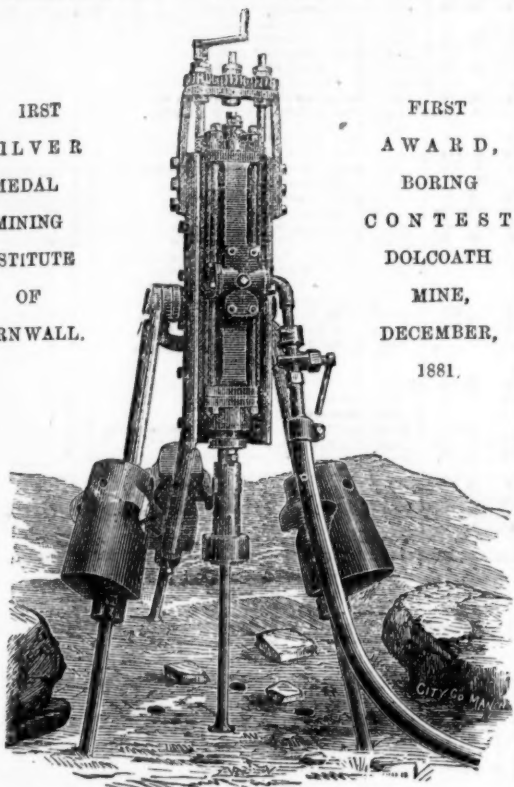
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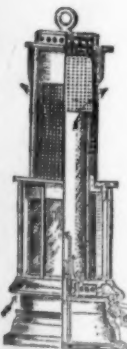
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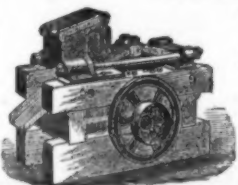
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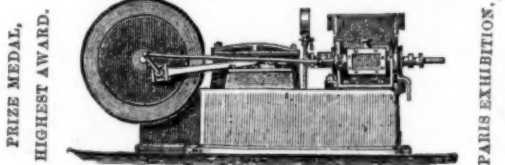
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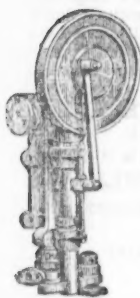
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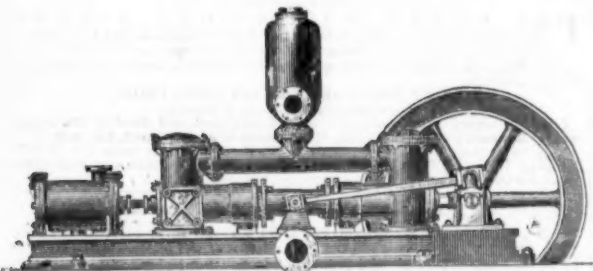
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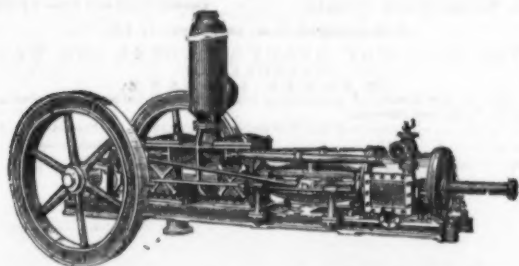
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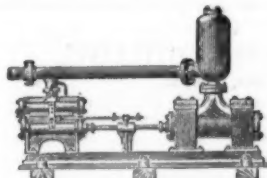
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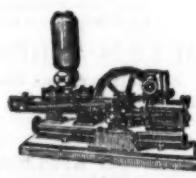
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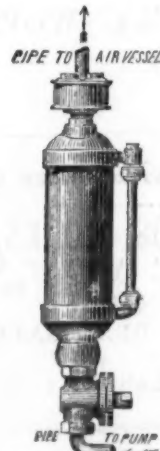
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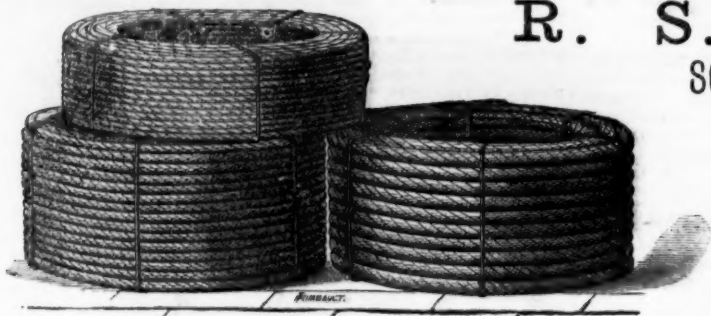
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The general condition of the Belgian iron trade has not materially changed. Some efforts have been made to advance quotations for iron, but these efforts have met with little success. The amount of business passing has been comparatively limited, and it is this fact which has checked any upward tendency in rates. Each week which passes without bringing fresh orders of importance complicates, of course, the difficulties of the rolling-mills. Pig has not varied upon the Belgian markets. Refining pig has made 27. 10s. per ton, while casting pig has maintained a quotation of 27. 18s. 3d. per ton. English pig has been maintained with some difficulty in Belgium at 27. 10s. 10d. per ton. No. 2 iron has been quoted at 57. 12s., and No. 3 at 67. per ton. Quotations for girders have scarcely varied. Plates have been in comparatively little demand. The imports of iron minerals into Belgium in 1882 amounted to 1,206,717 tons, as compared with 1,169,502 tons in 1881. The exports of iron minerals from Belgium last year were 334,901 tons, as compared with 367,463 tons in 1881. The exports of iron rails from Belgium last year were 22,136 tons, as compared with 35,136 tons in 1881. The exports of plates from Belgium last year were 42,166 tons, as compared with 35,179 tons in 1881.

The intelligence received with respect to the Belgian coal trade continues favourable. Deliveries are still being made upon an important scale, and all descriptions of industrial coal have been in good demand. Household coal has still been neglected; but there appear to be no important accumulation of stocks. The imports of coal into Belgium in 1882 amounted 1,037,449 tons, as compared with 1,015,870 tons in 1881. In these totals English coal figured for 266,532 tons and 289,101 tons respectively. The exports of coal from Belgium in 1882 were 4,290,639 tons, as compared with 4,476,783 tons in 1881. In these totals the exports of Belgian coal to France figured for 4,057,212 tons and 4,216,228 tons respectively. The exports of coke from Belgium in 1882 were 1,094,371 tons, as compared with 914,885 tons in 1881. In these totals the exports of coke to France figured for 938,104 tons and 782,291 tons respectively. It will be noticed that the exports of Belgian coal to France declined to some extent in 1882; but there was a large increase in the movement of Belgian coke to France and the Luxembourg. The state of the German coal trade has become less favourable. The demand for industrial coal has fallen off, and quotations have shown weakness in consequence. The deliveries of German coal to Italy have also declined. The extraction of coal in Westphalia in 1882 is returned at 25,811,245 tons, as compared with 23,642,946 tons in 1881, showing an increase of 2,168,297 tons last year.

The Paris iron market has shown a decided want of animation. The competition between merchants has been very keen, and merchants' iron has fallen to 77. 12s. per ton; plates for construction purposes have made 97. 12s. per ton. The French steelworks are still well employed. The Northern and Eastern Forges and Steelworks Company has just concluded a contract with the North-Eastern of France Railway Company for the supply of 3000 tons of steel rails at 77. 14s. per ton, delivered at Maubeuge. The production of pig in France in 1882 was something in excess of 2,000,000 tons; that of iron amounted to about 1,100,000 tons, and that of steel to 480,000 tons. There are at present five basic converters in France, and this number is expected to be shortly doubled. The value of the machinery imported into France in 1882 is officially returned at 3,497,360l., as compared with 2,664,080l. in 1881, and 1,683,320l. in 1880. The value of the engines and machinery exported from France in 1882 is returned at 1,096,520l., as compared with 1,041,440l. in 1881, and 956,960l. in 1880. It is estimated that the railway works sketched out in France will involve an outlay of 260,000,000l. In the course of 1882 contracts were let for 232,000 tons of steel rails for the French State railways. The contracts let earlier in the year were at somewhat higher rates than those obtained in the autumn. The imports of iron minerals into France in the last three years have been as follows:—1882, 1,425,870 tons; 1881, 1,286,760 tons; and 1880, 1,168,506 tons. The great bulk of these iron minerals has come from Germany, Spain, and Algeria. In 1882 Germany supplied 381,486 tons, Spain 481,928 tons, and Algeria, 302,265 tons. The German iron trade has been inactive, and prices have been tending downwards. The total production of pig in 1882 in the Zollverein amounted to 3,170,000 tons, against 2,900,000 tons in 1881, showing an increase of 270,000 tons in 1882. The increase arose almost exclusively in puddled pig. The production of the ironworks in the Dortmund district in 1882 was 1,011,000 tons of pig, 575,000 tons of iron, and 993,000 tons of steel.

ELECTRICITY AS A MOTIVE-POWER.—Electricity has long been threatening to displace gas as an illuminant. It is now entering the field against the horse as a means of traction. Two eminent electricians claim to be able to bottle up 12-horse power in a storage battery weighing 3 cwt., and they promise to produce in a few months a perfectly practical electric tricycle, capable of running 15 or 20 miles without recharging the accumulators, and able to ascend all such hills as are now possible for the foot tricycle, and even steeper gradients if auxiliary foot gearing be used to help the electromotor when the incline is great. The weight of batteries will not exceed the weight of a second rider, and it will run at the rate of 7 miles an hour. As the new motor will never go lame, or shy, or break its knees, or eat its head off when not employed, it is likely to prove a dangerous rival to the horse. The quadruped, however, which has survived steam need not fear extinction by electricity.

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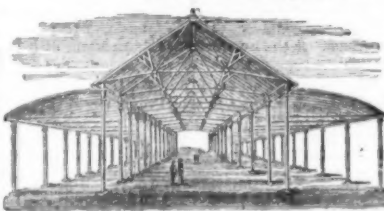
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GOLD HILL MINING COMPANY.

SIR,—Having to attend another meeting I was unable to remain at Cannon-street on Tuesday last to hear the concluding remarks in Col. Cochrane's very interesting address. I was struck by the able manner in which he entered into minute details, proving that he must have devoted his attentions assiduously to the company's affairs during his stay at the mine, but I must confess that when he informed the meeting that throughout his inspection he was accompanied by an intelligent young man, who he described as a "bit of a chemist," besides possessing other qualifications, I felt a sense of grave uneasiness, as it appeared that when the colonel did not go underground this young man would descend the shaft, and report the result of his examination. This is a very dangerous and unsatisfactory way to inspect a mine. I maintain that when an independent inspection is deemed advisable it should be done thoroughly and well, and without the aid of an experienced, practical mining engineer it cannot be complete.

Anyone endowed with ordinary business capabilities can form a shrewd opinion as to surface operations, but the important point is to learn the nature of the indications underground, as in too many cases it has been found that after thousands have been lavished in the erection of elaborate machinery, buildings, &c., the lodes have proved too poor to warrant any such expenditure. Therefore, if the directors felt it necessary to check the management on the other side it would, in my opinion, have been far wiser to have spent a little more money by employing a good practical miner to have assisted Col. Cochrane, instead of forcing him to be content with the services of a "bit of a chemist;" for, though I believe the Colonel has displayed remarkable ability in obtaining the information he laid before the meeting, it would have been more satisfactory to have been made better acquainted with the nature and value of the lodes by some independent authority.—*London, Feb. 8.* PRACTICE.

AUSTRALIAN QUARTZ MINING.

SIR,—The following article on gold-bearing stone, by an Australian miner of great experience, may, perhaps, be useful in hints to some of your readers who are interested in the Indian and other foreign gold mines. It is very properly entitled "Gold Reef Problems," and states that with some exceptions the gold obtained in New South Wales has been from the alluvial drifts, while in the neighbouring colony the quartz reefs have been the greatest and most permanent source of wealth. Alluvial mining, after all, cannot last long, though it may be exceptionally rich while it does. Quartz reefs, on the other hand, give work for a practically unlimited period, and furnish extensive and ready employment, and consequently are of greater value to a country than alluvial. The question has often been asked why two countries so adjacent as New South Wales and Victoria, should manifest such differences in gold mining, why the reefs in the former should be fewer and less permanent than in the latter. It is true that the geological characteristics of the two countries somewhat differ, at least a portion of New South Wales is very diverse to Victoria. The latter colony seems to have no coal deposits of value, while the former is noted for its wealth in that mineral. This marks out the distinction, but it applies only to certain portions of New South Wales. There are large tracts in this colony of similar formation to the reefing country of our southern neighbour and of Queensland. The great difference lies in the fact that these colonies seem to have found the reefs, the matrices from whence came the alluvial gold, while in New South Wales they have not been discovered in the majority of the old alluvial fields.

Various theories have been held as to the source of alluvial gold, but experience in the different great reefing districts of Australia has led to the adoption of a maxim by all practical miners: "Where alluvial gold has been found, there will gold-bearings be discovered." Practical reefers hold to this theory, and if great deserted alluvial fields are instances as showing its falsity, the answer is that the reefs exist, but that they have yet to be found, and to this no reply can be made. Experience has also demonstrated two remarkable facts that have been noticed on several fields. It has been found that where the gullies have been very rich in alluvial the reefs found near the surface on the hills have not yielded high percentage to the ton, while if the gullies were poor the neighbouring reefs have been extremely rich. Many instances could be given. The reason advanced by practical men is very feasible. They hold the theory that alluvial gold is deposited in the gullies by the forces of Nature—air, water, and chemical action decomposing the quartz reefs, which are gradually exposed to the action of these forces by the wearing away of the rocks which enclose them. Where the "cap" or "blow," as it is variously called—it must be confessed that, after all, we know but little of the laws governing the deposition of gold—has been worn away, and the metal lodged in the watercourse, it is not to be expected the remnant of the reef near the surface will be rich. Where, on the contrary, much of the upper reef remains, rich yields follow.

The rule, of course, has its exceptions. There are two kinds of reef—the saddle and the single—though in reality the difference is but of degree, the former having walls wide apart, the latter narrow walls. Saddle reefs occur in regular succession from the surface, lying one below the other, with "legs" running off into the walls on each side. In some cases where the "cap" or "horse" of the saddle has been washed away into the gullies by the work of ages, the "legs" have been mistaken for the real reef, and the resulting disappointment has often caused the abandonment of what has afterwards been found valuable country. The single reefs run right down from the surface and are generally thin and enclosed in hard walls. They usually yield a higher average than the saddle reef, and to pay them must, for the expenses are greater. In Victoria saddle reefs are the more numerous; here the single reefs have, so far, been in the majority, and to this some set down our inferiority, so far, in quartz. But while the quartz resources of this colony are in so infant a stage, and so little work has been done to find whether the lower quotations are larger and more permanent than those near the surface, we should hesitate at accepting hasty conclusions.

Practical reefers find if reefs are poor on the surface, and the "country" much disturbed, that when the secondary and tertiary saddle reefs are reached, or the single reefs are worked in the deep ground, a change for the better takes place. And practical men with large experience doubt very much whether in many cases what are called "single" reefs are not in reality the "legs" of decomposed saddle reefs. Whether such is the case or not remains yet to be proved, and the expenditure of money and deep sinking will not alone solve the problem. These theories generally refer to what may be called fairly regular formations. There are in New South Wales granitic and other formations in which gold has been found that so far defy any speculation or theory, and about which little or nothing is known. There is an influence which must not be lost sight of, for it is of great importance, that of the basaltic overflows, which have in many instances acted as gold cradles, or gutters of gold. Given an old watercourse in which for countless ages have been deposited the gold that laid in the rocks worn down by the agencies of Nature. A crater breaks out, and the lava forces along the wash-dirt, and as it were cradles it as it rushes against the sandstone or granite walls. Hence, owing to this action, very often the richest wash-dirt is found under basalt, as at Mount Jones, on the Rocky River. It has been discovered at Ballarat, where mining is carefully studied, that not only is wash-dirt found under the basalt, but that rich reefs exist beneath it. There is a great deal in this. At Ballarat practical men noticed that the leads in Sebastopol grew richer at certain places instead of obeying the law that as leads extend farther from the hills where the quartz reefs which fed them were they grew poorer and the gold lighter, the weightier gold of course remaining near its matrix. These men argued from this that other matrices, other quartz reefs, occurred in the rocks under the basalt, and fed the lead as it went on. They were scoffed at then, but time has shown they were right, for the Band and Albion found a rich reef underneath their alluvial working, and have demonstrated the great fact that below the basaltic plateau of Ballarat, so rich in alluvial wash, lay a

great reefing country—in fact, that there was a Sandhurst under Ballarat.

These undoubted facts should weigh with our miners in dealing with the many problems that must yet be solved before the quartz reefs of New South Wales are properly developed. Where are the reefs that have fed our alluvial gutters, or rather where are the lower formations of these lodes? That is the question which has to be answered, and to which we should give attention. In the case of the Rocky River gold field it is remarkable that the rich deposits have occurred only between Uralla and Maitland Point, and have mainly been confined to where the basaltic Mounts Jones and Welch were heaved up against the primitive rocks. Do reefs lie underneath, or are we to look elsewhere for them, for that they exist admits, we hardly think, of doubt. Practical work will alone solve these problems, for geology seems but a poor guide in gold mining, and our Government does little to help the miner, while the disrepute into which reefing has temporarily fallen, through ignorant mining or mere bubble mining, keeps away the capital necessary to work out the solution.

In treatment of ordinary gold-bearing stone the Australian (especially Victorian) miner has been so far a failure appears to me about as reasonable as to condemn the whole British Fleet because the Captain foundered in the Bay of Biscay. I know nothing personally of the Indian mines, and I know by experience that no importance whatever can be attached to samples. At the same time the samples of the vein matter and the containing rock which have been shown to me from the Indian mines, taken in conjunction with each other, are extremely unfavourable to the production of gold in large quantities; and if a person may venture an opinion without visiting the spot, I should say the only chance of the Indian mines turning up trumps is by following the reefs down into some lower geological formation.

INDIAN, AUSTRALIAN, CALIFORNIAN, AND BRAZILIAN GOLD MINES.

SIR,—There can be no doubt that the disappointment consequent on the failure of the Indian gold mines has done a very serious injury to legitimate gold mining all over the world; and it is a common thing to hear people say they will never again touch a gold mine, no matter how rich it may be; but this is the mistake of rushing from one extreme to the other. To condemn all gold mining simply because the Indian experiment has been so far a failure appears to me about as reasonable as to condemn the whole British Fleet because the Captain foundered in the Bay of Biscay. I know nothing personally of the Indian mines, and I know by experience that no importance whatever can be attached to samples. At the same time the samples of the vein matter and the containing rock which have been shown to me from the Indian mines, taken in conjunction with each other, are extremely unfavourable to the production of gold in large quantities; and if a person may venture an opinion without visiting the spot, I should say the only chance of the Indian mines turning up trumps is by following the reefs down into some lower geological formation.

If speculators have been bitten in the Indian mines they have themselves to blame; they rushed at the scheme without any discernment, or any modern or reliable data to go upon. In fact, as far as I can gather the only inducement held out to speculators to embark in the Indian mines was gathered from traditional reports which were handed down from the Creation, when things were pretty considerably mixed, and the uncorroborated opinion of one man. I respect the opinions of all scientific men very much; but I have a greater regard for facts, and it is a fact that cannot be disputed that the discovery of gold in all the richest gold countries in the world—Australia, United States of America, and Brazil—has been purely accidental, and the discoverers in every case tried to conceal the affair as long as possible, or until they had made their pile. It is not news to experienced mining men to be informed that each of the above-named countries yielded about 200,000,000 sterling worth of gold before there was any inclination or necessity to form companies. Having worked at a large profit the most comestable alluvial deposits which led up to the outcroppings of the reefs or lodes, some kind of combination was necessary in order to provide adequate machinery and plant for their proper development. It was not necessary for the promoters to obtain the flowery but hypothetical reports of either Brown, Smith, Jones, or Robinson; but the mines told their own tale, and the best reports were the amounts of gold that each man had in his possession, or the balance at his bankers. The genuineness of those gold fields placed the success of the industry beyond a doubt, and in the early days of those diggings few places were worked long that did not pay some hundreds per cent on the outlay. I have known hundreds of places abandoned, not because they did not yield a profit, but because the profits were not sufficiently large to meet the enlarged ideas of men who had become rich in a few months. It is true that a few of the most enterprising followed down the lodes as far as their primitive appliances would admit, but such cases were comparatively rare.

Capitalists who followed in the wake of the pioneers of the above gold countries by basing their calculations on positive facts and the introduction of more modern appliances, often did much better than the early diggers. There are hundreds of places at the present time in Australia, California, and Brazil which are not as deep as a Cornish adit, to which persons cannot only point, but can produce statistics to prove that they have yielded hundreds of thousands of pounds sterling worth of gold, and showed no deterioration in the quality of gold stone when they were abandoned from some other cause. Those countries are of established value, and each with a reliable index, so that with ordinary care it is almost impossible for investors in gold mines in the above countries to go wrong. If further proof were required of the productiveness of those countries, I might refer to the Port Phillip, Sierra Batters, Plumas Eureka, the Imperial Brazilian Mining Association, and the celebrated St. John del Rey, Brazil, each of which have paid the English shareholders hundreds of thousands of pounds sterling—in fact, the latter mine, which is of world-wide repute, is a perfect marvel, for after acknowledging to a loss of over 30 per cent. of their gold, equal to about 3,000,000 sterling, they have paid the fortunate shareholders in dividends about 1,600,000. Yet, notwithstanding the above facts, such is the inconsistency often manifested by speculators; and such is the range for something new that if any stranger were to come into the market to-morrow with a few nice samples from some undeveloped or unknown country, he would in all probability receive far greater attention than any person who offered the most legitimate scheme in any of those gold countries which have been proved to be the most productive and profitable of any in the world. If under those circumstances speculators are bitten, they have, as I before remarked, only themselves to blame, and it seems to me very unfair to visit the sins of their own folly upon what has been proved to be a very necessary and very profitable industry. I only express the opinion of most practical gold miners when I state that had the amount of money which has been put in the Indian venture been judiciously laid out in the above-named countries, either individually or collectively, the returns of gold would long ere this have satisfied English speculators that for large profits there is nothing equal to gold mining.

It seems almost incredible that a locality in which an English company owns a mine which has yielded so many millions of pounds sterling worth of gold like the St. John del Rey should receive so little attention from capitalists. This company commenced working on the outcrop of the lode, which they have followed down to their present depth without extending the ordinary exploratory levels usual in mining. It is perfectly absurd to suppose that such a strong lode as the Morro Velho will only prove productive just under the outcrop. I hold that, like other champion lodes, if it be properly explored longitudinally other places will be found as rich or even richer than the spot from which they have received their splendid dividends. I am strengthened in this belief from the fact that along the bearing of the lode for a distance of 40 or 50 miles most of the surface has been turned over at a good profit, and yet no other company has tried to follow up the St. John del Rey Morro Velho lode.

In Cornwall and most other places the opening of one rich mine has been the means of starting scores of other mines along the run of the same lodes, and most of them have been rich in turn; and I say with the greatest confidence that if the same principle be adopted in the neighbourhood of the St. John del Rey Company's Mines in Brazil, there is every probability of obtaining similar results.

Whatever the Indian mines may turn out eventually, there is no disguising the fact that up to the present they have done a very

serious injury to gold mining generally; and, in my opinion, the only way to restore public confidence in gold mining is for capitalists to devote proper attention to those countries known to be rich in the precious metal, and in which the elements of success has been proved to exist beyond a doubt.—*London, Feb. 5.* GOLD MINER.

INDIAN TREVELYAN GOLD MINING COMPANY.

SIR,—Shareholders in Indian gold mines are constantly complaining of mismanagement and protesting that something should be done, but nothing comes of their letters. Now, I think everyone admits that these mines were a fair speculation, and indeed are so still, but that they are being most wretchedly managed. Although I do not expect to see prospectus estimates borne out, still, I think the Trevelyan Company (in which I have over 300 shares), for one should, if skillfully managed, pay a fair dividend. But it will never do to fritter away our cash capital and then wind-up, and let new people secure a cheap purchase.

As I will not risk a heavy battle with directors all by myself, I propose to form a fund of, say, 50l., get a list of shareholders, issue a circular and proxies for an extraordinary meeting, and, if supported by a majority, turn out the present board and staff, and appoint a new body. Then send a first-class man, to be recommended by John Taylor and Sons, to India, to report on the property. Then, if his report be unfavourable, we can wind-up and cut a bad speculation; if it be favourable we will work the property and make it a success. Towards the fund I suggest 24 shareholders should contribute 2l. each, and I will account in the Journal for the contributions and their disposal, including my own.

The one thing necessary, besides a fund for expenses, is the support of shareholders, and I fancy most of them are well disgusted with the present regime.

Danson-street, Dublin, Feb. 7.

THE OOREGUM GOLD MINING COMPANY.

SIR,—The prospects for the shareholders in this company have, indeed, taken an almost unexpected and brighter change. A few weeks ago it looked dark indeed for wreck in the hands of the lawyers; but the reports from Mr. Justice Chitty's Court tell us the solicitor has come to grief, being cast in costs, accused of having used one of the petitioner's names without his consent. A pretty picture this of the way in which liquidation is sometimes instituted to the ruin of companies. Instead of this wrecking the directors, thanks to the energy of Mr. Malcolm Low, have appointed an efficient reduction officer, Mr. Fox Butlin, to put it to the test by crushing whether there is gold in payable quantity in the Ooregum quartz or not. For this, as a shareholder, I feel thankful. With all resources on the ground and the work so advanced, and quartz on the bank ready for crushing, it would, indeed, be most deplorable to see all that has been expended on this great property wrecked by one petitioner and the lawyers. Believing as I do in the reports of Mr. Raynar St. Stephen, as to the quantities of gold found by him repeatedly by washings and by reduction from the Champion and Munday lodes, I was gratified truly to find by the circular of Jan. 25, that the board had determined to show practically that they believe "this to be an honest, promising gold mining enterprise." Their efforts and determination deserve to be crowned with success.

Feb. 5.

THE NOUVEAU MONDE GOLD MINING COMPANY.

SIR,—About a fortnight since a letter appeared in the Journal, signed "A Shareholder," speaking very hopefully of the future of the property lately acquired in Venezuela, and stating that "mining will commence next month in earnest." What a paradox the last expression appears in connection with Nouveau Monde. The company was promoted in 1851, and now at the date of 32 years is, so we are informed, "in earnest." And, moreover, your correspondent tells us the dividend-paying period is approaching. Will any of the present shareholders live long enough to say—has arrived? I hold many shares bought at prices ranging from 12s. 6d. to 2l., and could I assure myself that the sanguine expectations of your correspondent would at no very distant date be realised, I should certainly purchase many more at to-day's quotations. May I ask this gentleman to be good enough to name his authority for the statements in his letter? He will, I trust, acquit me of any desire whatsoever to throw the slightest doubt on his credibility; but, unfortunately, shareholders in this, as in other concerns, are induced to believe and to disseminate statements made by parties intimately interested that have no foundation whatever in fact, and which are made solely with the object of (what is called in Stock Exchange parlance) rigging the market.

I was assured some months ago by Messrs. Taylor and Sons that an engineer and staff left England for the mines about the middle of October, or nearly four months since. It would probably interest others than myself to know how that time has been occupied, whether the staff have up to the present time reached Venezuela, and if so what is the present condition of the mine, and what are the future prospects. I feel sure that had the directorate been more candid with the shareholders they would not have experienced much difficulty in borrowing sufficient capital for working the concern; but, unfortunately, a Sphinx-like silence is preserved.

As an illustration of the apathy at present existing amongst the shareholders and investing public, I may mention that when three years since there was an endeavour to acquire the Naupai property, the shares rose to about 2l. 10s. Now that it has been bought they are at 7s. to 8s. Some time since I ventured to suggest the advisability of having the names of shareholders registered; this might easily have been done when the bonds were exchanged for new ones at the London office, George-yard, Lombard-street. It might now be rather a difficult matter as bonds are payable to bearer; but would it not be a benefit to all concerned?

Chiswick, Feb. 6.

ARUBA ISLAND GOLD FIELDS.

SIR,—It is not often you favour us with any particulars respecting the above gold field, but as one largely interested I have every confidence that under proper management, with the small amount of capital asked for in a special report, the Aruba Gold Mines will eventually turn out the prize of 1883. Long ago, I am strongly of opinion these mines would have been giving splendid returns in the shape of substantial dividends had the operations been conducted under proper management at the Island. We were told through your highly esteemed Journal on July 30, 1881, the company had engaged a gentleman of large technical experience in gold mining to assume the management at the Island, and that he took concentrating machinery with him. Now, Sir, what has all this amounted to, and how is it matters have not been turned to good account? I hear the mining expert referred to spent some time in not only surveying the whole property, which contains some 200 gold veins, and made an exhaustive report, but some good and encouraging experiments in the concentration of tailings, of which there are some 4000 or 5000 tons upon the Island awaiting treatment. I am credibly informed some of these tailings have been concentrated up to 29 ozs. of gold to the ton, and samples are now at the company's office, Gresham House, yielding over 18 ozs. of gold to the ton. Now, Sir, surely there is a mistake somewhere, or there is something behind the scene the shareholders and the investing public are not made acquainted with.

In a special report written by Mr. Irwell, the well-known mining engineer from Aruba Island, dated Jan. 27, 1882, he speaks very highly of one part of the property he tested during his stay, which has undeniably proved the deeper the workings are proceeded with the richer the quartz reef becomes (*vide report enclosed*), and everyone who knows Mr. Irwell's mining abilities have every confidence in his judgment and integrity, and we must all deplore the miserable state of affairs for the want of so small an amount of capital asked for in the special report. Some time ago we heard that it was intended to form a new company. Now, is this business being proceeded with? 5000l. seems a trifle to call up for such a valuable property, and should be found in an hour or two. We have heard a great deal about the wealth of the Indian gold mines, also that gold

after a shower of rain can be picked up in the streets on the Gold Coast.

At the Aruba Gold Mines there is any amount of gold quartz veins which will pay well for working. All that is now wanted is the small sum of 5000*l.* to enable the shareholders to reap a rich reward which they so well deserve; and I can but help thinking were the old shareholders appealed to in a proper manner that the response would in a short time be equal to the requirements. I will close by asking your numerous readers where can another such valuable gold property as the Aruba Gold Mining Company possess be found? This property is capable of producing many thousands of tons of quartz per month, yielding from 1½ to 2 ozs. of gold per ton, and well equipped with machinery.

THE CALLAO BIS GOLD MINING COMPANY—No. III.

SIR,—In continuation of my letter No. II. which appeared in last week's Journal, I will pass from the No. 1 shaft to other works of the company executed by me during my residence in El Callao.

The crushing mill is situated some 800 ft. south of the No. 1 shaft, and was erected upon the side of a hill so eminently suitable that it would almost seem as if Nature herself had formed the ground for this special purpose. The building is composed of the choicest, hardest, and most durable woods of the country—most carefully selected under my own personal supervision; the trees from which these timbers have been taken were all felled at the right time of moon—a most important precaution—and cannot be surpassed for strength and durability. The structure is 82 ft. long by 45 ft. wide, is lofty, well ventilated, and roofed in with galvanised corrugated iron sheeting. At the back of the mill, and on the upper slope of the hill is formed—

Platform No. 1, used as the quartz floor or dump heap for quartz as it arrives from the mine. This platform is capable of containing upwards of 500 tons of rock at one time, and by a small outlay the area can be increased so as to afford available space for three times that quantity. Immediately below this is—

Platform No. 2, or the crusher floor, fitted with a Blake Marsden's crusher for breaking the rock small before it passes to

Platform No. 3, or the feed floor, where it is collected and gradually transferred by manual labour to the batteries where the stamping and amalgamation take place.

Platform No. 4.—Here are erected the mortars and sluice tables. The mortar blocks which form the foundation for the mortars were procured with the greatest difficulty through the courtesy and kindness of Señor Antonio Liccioni, the President of the Callao Company, by whose permission Señor Figarella, the Conservator of that company's woods and forest, accompanied me and permitted me to select some trees of magnificent proportions and old forest growth not procurable on the Callao Bis land, and being more accessible than those on the Sosa-y-Méndez property. Each of these pieces of timber was cut from trees measuring about 11 ft. in circumference and weighed, in 10 ft. lengths, when delivered at the company's saw mill, about 2 tons 5 cwt. each. The difficulties and labour attending the transport of such blocks of timber in such a rough country as Guayana, with the rudest appliances and no roads, can be scarcely appreciated to their full extent, except by those who have had that bitter experience. I should mention that no change whatever was made by the Callao Company, and I feel that the most cordial thanks are due to Don Antonio Liccioni for his liberality.

Platform No. 5.—Upon this, situated nearly on the ground level, are erected the boilers and engines which drive the mill machinery. Here, again, as in the case of the No. 1 shaft, the mill is underpowered as to its boilers, through which defect the mill can never run full time, it being found necessary to hang up a battery of five stamps during the time in which the crusher is at work. The building is designed in such a manner that 40 more stamps can be added—20 on each side—at a minimum of extra expenditure for shed room. The greatest defect, however, in the machinery sent out is found in the mortars, which measure 4 ft. 2 in. (outside measurement) only in length, and at least 6 in. too low in the discharge. The want of sufficient length becomes a serious question, since it will be found impossible to run five stamps, as it was intended in each mortar, there not being sufficient clearance between the sets of heads and shoes when in motion. I know of no way to remedy this except by running only four stamps in each battery, but such a plan reduces what should be a 20 stamp to a 16 stamp mill.

The contract for the erection of this mill was let to Mr. Edmund Snell who carried out his part of the work to my entire satisfaction, and I record my thanks to him for the skill he displayed, and for his cheerful and cordial co-operation in everything which concerned the company's interests throughout the whole time during which he was working for the company. The erection of the mill cost about 1800*l.*, and it will rank second to none in Guayana. The water supply is ample, and is pumped through 5-in. pipes from the Yuruari river, the distance being about 4000 ft., and the difference of level about 100 ft.

I append an extract from the same letter of Mr. J. A. Skerthly, dated April 1, 1882, as that from which I took an extract last week on the subject of the No. 1 shaft:—

The site of your mill has been admirably chosen, and the erection exhibits considerable ability in plan and constructive talent, and I cannot but congratulate you upon the excellent character of the work. It will compare most favourably with any mill in any part of the world. I think you will find a difficulty in keeping steam and preventing priming with your present boilers. I would suggest a steam dome at least for each. With this exception I am much pleased both with the mill machinery, its design, and the manner in which it is being erected, especially taking into consideration the extreme difficulties you have had to contend with. The saw mill, carpenters, blacksmith shops, &c., are well planned and accessible, and the water system has been admirably designed and carried out.

One word before closing as to the reported discovery of the Callao vein. The telegram announcing this grand event reached London on or about Dec. 20, 1882; the confirmation of it was received from Mr. Nicholson in due course on Jan. 12, 1883, in a letter written in Trinidad. Mr. Nicholson reached the mines about Dec. 28, 1882, but the shareholders and the public have not yet, to my knowledge, received any corroboration of the fact from his own personal inspection, though telegraphic communications could have been received from him on Jan. 4 and 20, and on Feb. 4 last. I have not the slightest doubt whatever as to the correctness of the news; but its corroboration by Mr. Nicholson, from his own personal examination of the lode in the No. 1 shaft, would make assurance doubly sure. I have the fullest confidence in Capt. Thomas Kitchen, who probably sent the news to Trinidad; but the report of Mr. A. H. Nicholson, who, like myself, is an old Australian digger, would be very welcome to all Callao Bis shareholders, including myself.

C. CAMPBELL DOWNES, A.M.Inst.C.E.,
Late Resident Engineer and Manager in Venezuela of the Callao Bis Gold Mining Company.

CALLAO BIS GOLD MINING COMPANY.

SIR,—Referring to the letter of Mr. George Attwood, forwarded to you by the secretary of the Callao Bis Gold Mining Company, and published in last week's Journal, the facts are these:—After a careful survey and an examination of the land round and about the Callao Mine, between Nov. 9 and Nov. 16, 1880, I, on the morning of the latter day, chose the site for the No. 1 shaft. Mr. Attwood, in his capacity of consulting engineer to the company, approved it, and sinking was commenced on Nov. 17, 1880. Mr. Attwood and the late Capt. Robotham expected to strike the Callao vein at about 45 ft. from surface. Anticipated no such rapid success. The belief that the Callao vein would be met with at so shallow a depth caused Mr. Attwood to fix 6 ft. by 6 ft. as the dimensions of the shaft, about the size of which there has been so much criticism. On Dec. 16, 1880, when Mr. Attwood left Callao, the shaft had reached a depth of 74 ft. 6 in. from surface, having been pushed down as rapidly as possible through the soft detrital formation without water to contend with, and without waiting for timber.

In January I received a letter from Mr. Attwood advising that, as the vein had not been met with, the shaft should be sunk to the hard country rock, and therefore cross-cuts should be driven, first west, then east, to prove the ground. On March 20, 1881, in writing to the directors on this subject, I expressed my opinion that Mr. Attwood's advice was not sound, and that I should prosecute the

explorations to the east. Subsequent events have proved, in practice, the correctness of my theory.

London, Feb. 8. C. CAMPBELL DOWNES, A.M.Inst.C.E.

ROCK-DRILLS IN SPAIN.

SIR,—A short time ago I announced through the Journal that my patent drills were driving an adit in hard slate-rock in Spain, at the rate of 13 yards per week, with inexperienced workmen. It may now interest your readers to learn that, according to the latest accounts from the La Reyna Mine, the rate of progress is 24 yards per week, which I believe is almost an unprecedented speed in driving levels. And notwithstanding that the price of coal consumed at the mine in compressing the requisite air is 2*l.* per ton, the cost of driving the level is less than what it would cost if done by hand-labour. The machinery for compressing the air consists of an 18-inch compressor, driven by a compound engine, manufactured by Messrs. Fawcett, Preston, and Co. Besides this engine there is a steam-pump, having a 5-inch steam cylinder and a 3½-inch ram. 100 yards from the boilers, down a well raising six gallons of water per minute to a height of 170 ft., and a donkey engine for feeding the boilers. The total consumption of coal for these three engines is only 16 cwt. per 24 hours. The indicated horse-power of the compressing engine during 24 hours is 50-horse power for 9 hours, and 9-horse power for 15 hours, making an average of 24·3-horse power for the 24 hours. Disregarding the consumption of coal of the lesser engines, which, probably, amounts together to a tenth of the total, and dividing the consumption of 16 cwt. by 24·3-horse power, we obtain a result of 3 lbs. of coal per horse-power per hour. This result is mainly due to the manner in which the boilers are set, and the manner of burning the fuel, particular regard being had to the gases having thoroughly burnt themselves out before coming into contact with the cooling surfaces of the boiler. With a comparatively small engine, such as the one I here refer to, I think it will be allowed that an expenditure of 3 lbs. of coal per horse-power is a very satisfactory and unusual result.

With regard to the fast driving, anxious as I am to get as much credit as I can for my drills, I think it only fair to state that a large amount of the success is due to very able management and supervision on the mine, as is apparent from the gradual increase from 13 yards per week to 24 yards. Also some credit is due to the instantaneous fuse manufactured by Messrs. Bickford, Smith, and Co., whereby the centre cone is taken out to a depth of 5 to 6 ft. in one blast.—Liverpool, Feb. 6. F. B. DERING.

REDUCTION OF GOLD ORES—THE BRITTEN PAN.

SIR,—I have failed to find in Mr. T. A. Readwin's recent communications explanations of sundry points of my letter that appeared in the Journal of Jan. 20. I have also failed to see that he has in the Britten-Readwin pan to a large extent done away with the wear and tear appertaining to the parent pans. If he had extended the cups a little in the bottom of the pans, and had removable cups made to fit into them, then he would have done away with the wear and tear of the parts that wear out so readily. Mr. Readwin asserts that he believes that at one time I would have gone anywhere for the purpose of using the (to him) objectionable apparatus. I do not know what he means to convey by these remarks, but I know that I never have been that much enraptured with a Britten pan as to go far out of my way for the purpose of using it. He thinks that I should be careful of what I write, and how I write it. This is excellent advice, and I hope that Mr. Readwin will practise it himself a little more in future than what he has been in the way of doing in the past. What I wrote in respect to the defects in the Britten-Readwin pans are undeniable facts, and may be of interest to those who may contemplate using them, although apparently not so to Mr. Readwin.

I have not, it is true, tried his quicksilver, and knowing as much as I do of some of his extraordinary imaginary discoveries I am not likely to be in a hurry to try it. It may, however, do all that he says it will, and if it does why confine it to Britten-Readwin pans? Why not manufacture it largely, and use it in any of the different kinds of amalgamating machines in use? Many of them are quite as much to be relied on for saving gold as Britten pans are, and do a great deal more work in the same space of time. Of Mr. Crookes's amalgam, Mr. Readwin wrote as follows: "I have never spoken or written against Crookes's amalgam." And then he goes on depreciating it, and extolling himself. He says: "Mr. Crookes had a crucial test of his own amalgam himself, and got altogether baffled, losing a lot of quicksilver and gold too," and he further wrote of it as if nobody knows how to use it. He says, "Such use involves long and special training, and varied technical experience." And he adds, "Where are to be had the special trainers in the occult art." What nonsense. His assertion that I gained my experience in Wales on the very spot where he says that he made lots of experiments is not correct. Where I gained my experience is many thousands of miles from where he has ever been. My experience with Britten pans I got in Wales, but I never had anything to do with Mr. Readwin and his experiments, and his peculiar notions about gold and amalgamation.—Dec, Feb. 6. F. ANDERSON.

OLD SHEPHERDS, AND GREEN'S DRESSING MACHINERY.

SIR,—As a shareholder, and one greatly interested in the ultimate success of this mine, I have read with much interest from time to time various articles on Green's automatic machinery, all more or less of a condemnatory nature. "Observer" has in last week's Journal a few startling facts, which must be a great drawback to this property if greater results cannot be obtained by Green's machinery. The dressing appliances on a mine likely to make such large returns of lead as soon as the winding engine can be put to work should be of the most approved construction; and not less than a 30-in. crusher should be used, and jiggers of a larger type and stronger should be at once erected, capable of dressing at least 10 tons of stuff per hour. Was this automatic machinery kept to work for Mr. Green's instruction and amusement, or who bears the loss incurred in the working? Perhaps Mr. Green may be debited with this. In any case the shareholders will do well to enquire into this matter, and at once condemn such toy appliances before further cost is incurred.

Feb. 5. INDIGNANT SHAREHOLDER.

LEAD MINING INDUSTRY.

SIR,—Cumberland, Northumberland, and Durham have been long celebrated for the large and continuous quantities of lead ore which their numerous mines have yielded. Recently, however, the low price of lead has greatly restricted the output, and even suspension of operations, and liquidation in some instances has been resorted to. Are such measures on the part of mineowners justifiable even in their own interests? I answer most emphatically, No. When the price of lead is low as at present, and labour cheap, is the very time to open out and develop the mines by making available for better times extensive reserves that may be largely drawn upon when prices stiffen, as they will most likely shortly do. Lead mines in the above-named localities have always, with very rare exceptions, given profitable returns, and in many instances large dividends; and it is to this fact (strange though it may appear) the present dullness is in a great measure due, for the owners having become inured to long and continuous good times, have become panic stricken, even while the mines are as now, largely self-supporting. They have had little or no hard times to contend with in the past, and small profits for a season will not satisfy their avaricious nature, to the great hardships of the working classes, and to the present depreciation of mining stock.

Had a sound business view of the situation been taken, it is at once apparent that laying open reserves of ore and otherwise developing the mines is tantamount to placing money out at interest, for no sane man believes that the price of lead will remain long at the present figure, and when prices are up every wise mine manager will be in a position to return large quantities of ore, and so recompense shareholders and owners for their past outlay. Mr. Beaumont has been for some time at variance with the Ecclesiastical Commissioners on the question of dues, and it is said a surrender of his lease is contem-

plated. His extensive mines, if in the hands of several companies, would doubtless benefit Weardale and its rich surroundings.

I notice in your advertising columns that the Northern Lead Mines are to be sold by auction, with their extensive plant, &c. Some enterprising party will doubtless have a prize in them, for I am informed on good and scientific authority that the Brandon Walls and Thorney Brow portions of the property are good mines, and all three mines are capable of yielding, besides lead ore, very large quantities of iron ore, and only require a little capital to open up rich courses of ore. Brandon Walls at the engine-shaft is capable of producing 30 cwt. of lead ore to the fathom.—Cleveland, Feb. 5. OBSERVER.

PARYS COPPER CORPORATION.

SIR,—In the Journal of Jan. 20 I read with much interest the account of this meeting. I trust that the lucid way the Chairman laid before the shareholders the position of their property will not fail to induce those interested to well consider what their future in them. They possess a property with all machinery and appliances, with discoveries of great value—in one part 4 tons of copper ore per fathom, a discovery in new ground, and above all a large deposit of native ochre estimated at 20,000 tons; when raised, "at the cost of only 2s. ton," worth 10s. to 15s. a ton, which shows quite 10,000*l.* profit, and further, if washed, would then realise 2*l.* a ton. For what are they asked? I read in the report that if 3000 shares are applied for their Chairman will take 400. It surely requires but little effort for those interested to find the amount. They will receive a 1*l.* fully-paid share for 10s., and if each shareholder would subscribe for one new share for every 10 that he holds, those who have the management of their property may not only be able to come to satisfactory terms with the lessors, but be in a position to vigorously prosecute the works, and the profits shown to be there will not be lost to the present shareholders and go into the pockets of those who have neither borne the expense or care of the past 12 years. They should remember the great profits this mine paid in former years and the future yet theirs if they retain their property.

London, Feb. 7. A. O. B.

HERODSFOT SILVER-LEAD MINE.

SIR,—It is indeed cheering to read the letter from the secretary of this mine, published in last week's Journal. Those of your readers who have watched week by week the report of the resident agents cannot fail to have been struck with the rapid strides made in its development and the permanent improvement in the value of the lode at every point of operation. The mine is opening up splendidly, and the reserves already are considerable, whilst a most important feature to observe is the remarkable richness of the ore for silver—over 100 ozs. to the ton. Herodsfot, like all other lead mines, has of late passed through trying times, but the shareholders are now about to be recompensed for their patience and outlay of capital; for, even at the present price of lead this ore realises upwards of 17*l.* a ton, and large returns can be regularly made. H. C. T.

DOLCOATH MINE.

SIR,—It has been often said that "there is nothing new under the sun." It might have been a true maxim in Solomon's time, but at present a startling novelty has occurred in the demand which Mr. Basset has made of 40,000*l.* for a renewal of the lease of Dolcoath Mine, five years before the expiration of the existing lease! The demand (which is unprecedented) may well excite both surprise and indignation on the part of all mining men, as well as those more immediately concerned. If such a demand be prosecuted the circumstance will discourage speculation in mining pursuits. If the lord really wishes to have a premium at all why ask for it now, five years before the expiration of the present lease? He ought to have said to the company—"At the determination of your lease, which will be five years hence, if you desire its renewal you must pay me 40,000*l.* by instalments out of the profits." If I were the owner of Dolcoath I would reply thus—"I shall not want a new lease for five years; before the end of that period I will wait on you, and see if we can agree on reasonable terms for a new lease. At present it is not necessary." Considering that the lord has received such an enormous amount in dues out of discoveries made by men who risked their capital in the exploration of the several lodes in the mine, and who pay him now about 9000*l.* per annum, the mention of such a premium, or any premium, is absurd, and shows a selfishness which must disgust all reasonable men.

During the five closing years of the lease the company will, of course, do their best to realise all the reserves, like the Messrs. Taylor did in the Consolidated Mines, which they left to Messrs. Williams and Co. in an exhausted condition as to the discoveries then made. Dolcoath is so deep that by the end of the term a new lease may not be required.—Feb. 7. E. S.

TIN GROUND AT GRAMPOUND AND ST. AUSTELL.

SIR,—There is between Grampound and St. Austell a piece of maiden or virgin tin-bearing ground; it is a stratum of ground which is highly mineralised. The property is about three miles in length, one mile in breadth, and has within its limits four large elvan courses and 21 east and west tin-bearing lodes, besides cross-courses, cauners, and other valuable properties, and wherever they form junctions they will yield large deposits of tin. There are only two mines within the limits of this ground which have been wrought to any great extent—Old Hewas and Old Polgooth—which have both been very rich for tin. Hewas at one time returned monthly for five years nearly 70 tons per month, which would amount to above 4100 tons; and at the Old Polgooth, when worked by Messrs. Taylor and Company, my father weighed off from that mine at Truro, and other smelting-houses in this county above 4500 tons of black tin. I was always brought up as a miner in this district, and know the locality well, and my firm opinion is if this ground were to be worked in a proper manner it would amply pay investors, and return fully as much tin as Hewas and Polgooth did, when worked by a sufficient number of hands. At the west end of this ground is the Venton-whyn sett. To the east of that is the King's Down Mine, which adjoins Old Hewas, and the Hewas lodes run through the entire length of this sett. This bids fair to make a good mine, as there is tin in the lodes almost to surface. This promising mine belongs to Mr. David Cock and his friends. At a small distance to the east is the Polgare sett, which has the Polgooth lodes running through the sett. The Polgare Mine is owned by Capt. John Edwards. All this maiden ground is situated by the side of the Truro turnpike road leading into St. Austell, rendering transit of materials easy, and the erection of dressing appliances inexpensive. Now, Sir, we want investors to take hold of the mining plough in this district and plough deep furrows; then we should get good mines here as well as in the Camborne district. The only thing wanted is capital. The lodes are embedded in a pan of beautiful killas at the foot of a granite hill, such as is often found to be congenial for mineral. I could highly recommend this new ground to investors; and, if developed as it should be, it will be a prize to the shareholders and a blessing to the inhabitants of this district. EDWIN BAWDEN.

Hewas Water, St. Austell, Jan. 20.

METALS AND OILS.—M. Chevreul found metals to have, in certain cases, a remarkable influence on the oxidation of oils. Recently M. Livache has used, in this relation, finely divided metal (such as is got by precipitation), instead of metallic plates, and the effect is greatly increased. He thus tried lead, copper, and tin, and found lead to have the strongest action. If precipitated lead moistened with oil be exposed in air an increase of weight is very soon observed and this is greater the more silicate, or drying, the oil. With linseed oil the increase of weight reaches a maximum in 36 hours, whereas, exposed alone to air the oil would take several months to reach this maximum. A solid and elastic product is obtained. With non-drying oils the increase of weight is much less, and takes much longer to be completed. The result in question, M. Livache points out, cannot be attributed to a simple division of the matter, allowing more active circulation of air for the same experiment made

with various other substances in fine division, does not result in any like increase of weight, the effect here is merely like that in the case of a thin layer of oil exposed to air. The change in the other case must be attributed to a direct action of the metal. Operating with different oils, M. Livache found the increments of weight proportional, except in the case of cotton seed oil, to those observed in the fatty acids of the oil exposed to air for several months. He suggests that industry may derive certain advantages from the facts observed. Thus, a rapid method is indicated of distinguishing drying from non-drying oils. Further, the heating of oils might be advantageously replaced by a circulation, in contact with air and in the cold state, over iron or fine plates having precipitated metallic lead on their surface. The oils so obtained would be always less coloured, and would retain great fluidity, while the objectionable odours and the danger of fire which attend the present mode of treatment would be avoided.

REPORT FROM CORNWALL.

Feb. 8.—There is only one topic for discussion this week in the mining circles of the county, and that a most serious and black one. We allude, of course, to the demand made by Mr. Basset upon the Dolcoath adventurers. When this rumour was started last week we did not care to comment upon it, for two reasons. First, we bore in mind that when a similar statement was current some time since an official denial was given to it in reply to our enquiry, and wanting more definite information of that kind it did seem unwise to enter into the discussion. Moreover, and secondly, it is not always desirable to comment upon points which are actually under negotiation. Under the circumstances, therefore, it appeared, to use the homely proverb, as if the least said was likely to be soonest mended.

But the conditions are now so far changed that silence is not only impossible, but would be highly injudicious, even though the exact terms of the demand which Mr. Basset has made are not fully known, and Mr. Bolder, his steward, who has the credit of being the moving spirit in this unfortunate business, has suggested in effect that discussion should be stayed until all the facts are out. So far the most definite statement made is that published in the West Briton, which avers:—

"A shareholder informs us that there is no doubt whatever of the truth of the rumour. The sum demanded by Mr. Basset is, we have the best reason for believing, 40,000*l.*, to be paid for, as that gentleman alleges, out of the profits as they accrue, not in one lump sum as some imagine. Moreover, the adventurers are to surrender their present lease, which has five years yet to run, and to take another lease for 21 years, dated back from Jan. 1, 1883, at the utmost dish or dues of 1-15th on the gross receipts of the mine—not on the profits. Moreover, at every meeting of the adventurers, to commence from April next, the profits are to be paid to Mr. Basset to the extent of one quarter of the profits of the working until the whole 40,000*l.* is paid; that is, supposing Dolcoath to make a profit at the meeting in April of 6000*l.*, before the adventurers receive one penny as dividend, one quarter part of the 6000*l.*—1500*l.*—would be paid to Mr. Basset, towards the premium of 40,000*l.* demanded. Of course, if the adventurers yield up their present lease of five years, the new lease is for 16 years only.

These figures may or may not be exact. The details given may or may not be strictly accurate—that is a matter of comparatively small consequence. In any case the fact remains that it is sought to introduce an entirely new principle into Cornish mining, and to lay fresh burdens upon an industry already weighted to the verge almost of extinction. The farmers are clamouring for "tenant right," and will get it; and it is tolerably evident that the adventurers in mines will have to do the same. Here is Mr. Basset in receipt of a princely income, earned wholly at the cost and the risk of other people, not satisfied with the results, but unless the rumour is wholly false, anxious to improve matters by killing the goose that lays the golden eggs. It is bad enough to have to pay dues, whether profits are made or not—to take all the risk, and let somebody else have the certain advantage, but to pay through the nose for this privilege in addition is outrageous. Of course Dolcoath is a paying and a profitable mine, but it should be managed on the same principles as other mines for all that; and we may be perfectly sure that the same measure that is meted forth there will be applied in its degree elsewhere when the occasion comes. The mine is entirely the creation of the adventurers. It is their pluck, and skill, and energy that have made the else worthless mineral deposits in this part of the Basset property the source of a princely income to that family, and the mainstay of the district, and to fine the company heavily for privilege to continue in the occupation of the property which they have created is opposed to all one's ideas, not only of liberal conduct, but of right and wrong.

It is quite as well to speak plainly on such a proposition. In almost every other country than England the minerals are the property of the State, not of the individual, and it seems that we have only to regret it is not so here, for even if this demand is withdrawn an almost incalculable injury has already been done to mining property and mining confidence. And in sober truth the present attitude of the mineral lords towards their mineral property is really the result to a large extent of their encroachments upon public rights. Under the old "bounding" lanes, which the landowners have elbowed out of existence, every man who discovered a mineral deposit had the right to work it, whether the owner of the surface consented or not on payment—not of any fine, but of simple dues. It is, indeed, a fact in no very limited sense that the minerals of the Stannaries originally belonged to the miners of the Stannaries, and not to the surface lords at all. Then, again, the present attitude of a mineral lord towards a mine is wholly distinct from that customary, even in comparatively recent days. If the lord then took his dish of ore it was not only because he was lord, but because he was co-adventurer. He took, and was content to take, his share of the risk, and did not insist upon a monopoly of the profits. Times have indeed changed.

That this blow should have been struck at Dolcoath, the pioneer mine of the county, and the mainstay of the chief mining district, makes it doubly serious, and imposes a grave responsibility upon the adventurers, in a representative sense. If this demand be of the nature stated, and if it is persisted in upon Mr. Basset's behalf—we prefer for the time to regard it as the act of his adviser or advisers—then the boldest course will be the wisest, and that is refusal and realisation. There are five years yet left of the lease—make the most of them within its powers, and leave Dolcoath the stripped memorial of a line of policy unheard of or undreamt of in Cornwall before. There is no other alternative if mining is to be so utterly destroyed, and the best possible answer to a mine lord who wants his property to be worked solely for his own benefit is to tell him he had better work it himself.

We thought the lowest depth had been reached at South Caradon, but Dolcoath has followed a lower depth still. The meeting on Tuesday next is looked forward to with the intensest interest.

TRADE IN SOUTH WALES.

Feb. 8.—The cutting of the first sod of two new docks at Cardiff and Newport, the first by the Marquis of Bute, and the second by Sir George Elliot, M.P., last week, was the cause of some delay in the shipping of coal, to which must be added the very adverse state of the weather. However, the amount sent away was an average quantity, Cardiff having shipped 110,961 tons foreign; Newport, 26,184 tons foreign and 13,140 tons coastwise; Swansea, 12,009 tons foreign and 3998 tons coastwise. It is probable that with more settled weather this month and next may see these figures largely increased, as there is no lack of orders, while prices maintain their firmness. Good colliery seconds may still be quoted at 11*s.*, while inferior sorts are as low as 9*s.* 3*d.* House coal is in active demand, while patent fuel is also in request, and a firm price is maintained. There is some attempt to get up an agitation in favour of a lessened output, but not much success attends the wire-pullers.

A case of considerable interest to mineowners was heard at Neath, on Tuesday last. It appears that the men in the Gnoil Colliery had a strong impression that they were labouring not far from some old workings, and they had apprehensions that the accumulation of

water might break in upon them and drown them. They represented their case to the manager, who offered to bore if they would pay 5*l.* towards the expenses, which they declined to do. They then refused to go down the pit, and the manager summoned them before the magistrates, who, after a patient hearing, fined them 10*s.* each and costs for neglecting their work. The men still hold out, and have held a meeting, at which their grievances were set forth. It may be remarked in favour of the men that they have been proved to be correct in other cases when managers have been mistaken.

The iron and steel trades show signs of weakness, and as prices are as low as they can possibly be the next move may be a partial closing of some of the works. Iron ore is in weak demand, and prices are lower. Newport has received 11,334 tons from Bilbao, and 3320 tons from other places. Cardiff has received 6748 tons from Bilbao, and 4222 tons from other places. A parcel of 3468 tons of iron has been shipped from Cardiff, while Newport has sent away 1800 tons to Madras, 830 tons to Algoa Bay, and 508 tons to Rio de Janeiro.

There is another failure reported in the tin-plate trade, but the name of the firm has not yet transpired. Of 341 mills in South Wales, Monmouthshire, and Gloucestershire, only 145 are now working. Prices have receded somewhat in the last few days, good coke-made only realising from 16*s.* to 16*s.* 6*d.* at Liverpool. Tin is now quoted at 92*l.* per ton.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 8.—The general manager of the collieries of the Earl of Dudley has stated that, with the colliers in the present state of unrest, it would be unwise, even if it were possible, to reduce wages. And as such a result would necessarily follow a drop in the standard prices of coal, his lordship feels himself compelled to maintain these, for the present, on the basis of 11*s.* for furnace coal. But his lordship's limestone is reduced 3*d.* per ton, and now stands at the quarries at—Grey crystalline for blast furnaces, 4*s.* 3*d.* per ton, and blue or thick bed, for agricultural or masonry purposes, 4*s.* Some heavy sales of ironstone are reported this week, one or two of the sales being between 5000 and 10,000 tons in a line. The pig-iron trade is unaltered on the week, 65*s.* being still quoted for all-mine sorts, and 50*s.* for part mines. Last week's reduction in the quotations of a few of the marked finished iron firms has tended to depress the market, but no further fall has occurred. Marked bars are now 7*l.* 10*s.*, and sheets and plates of the same houses 9*l.*

Alderman Avery, President of the Rail and Forge Wages Board, awards that under the sliding-scale, which comes into operation in April, puddlers' wages shall be 9*d.* per ton in excess of 1*s.* for each 1*l.* sterling in the ascertained net average selling price of iron. The scale is to continue in operation for six months certain, and there is a minimum attached of 7*s.* 3*d.* per ton for puddlers.

The South Staffordshire Mines Drainage Commissioners met in Wolverhampton on Wednesday, and levied a general drainage rate of 1*d.* per ton on all minerals raised during the last half-year, to be payable on April 1 next. The Chairman, at the same meeting, complained of the reluctance which mineowners evinced to pay rates. These ought, he said, to be as much respected as the Queen's taxes; but, instead of this being the case, the Commissioners had often to make as many as four applications, and, in some cases, to worry first one owner and then another even to obtain something on account. There were now large sums of money outstanding, and, if the disreputable shuffling continued, the Commission would have to abandon the velvet glove policy which they had hitherto adopted in this matter. The Commissioners formally sealed agreements for loans to the amount of 30,000*l.*, repayable at 5 per cent. interest, to be lent upon the security of the Tipton mines drainage-rate.

The position of Chief Government Inspector of Mines for the district of South Staffordshire, East Worcestershire, and Cannock Chase has become vacant by the death of its last and only occupant. This was Mr. James Philip Baker, late of Wolverhampton. The deceased gentleman entered upon business life as a land surveyor and draughtsman. Later on he was engaged for some time in an unsuccessful colliery undertaking, and afterwards became mining engineer to the well-known firm of South Staffordshire ironmakers, Messrs. Barker, whose concern is now the Chillington Iron Company. It was whilst he was thus engaged that the Mines Regulation Act was passed. Mr. Baker's wide experience, and the influence of several leading colliery owners of the district at once secured him the Inspectorship created under the Act, and he filled it to the time of his death. A few years ago pressure of work necessitating an Assistant Inspector, Mr. W. B. Scott was appointed.

The next annual conference of the Federation of Miners for the Midland counties is to be held at Hanley, North Stafford, on March 6. The board of the Federation, at a quarterly meeting in Wolverhampton, on Tuesday, passed a resolution of congratulation at the success of their recent efforts to secure more complete organisation among the men. As the result of the special organisation meetings in the Cannock Chase district, eight new lodges have been started, and large numbers of new members have been enrolled.

Benjamin Banks, colliery engineman, against whom a coroner's jury at Wednesbury, on Tuesday, returned a verdict of manslaughter, in connection with the recent accident at the Willingsworth Colliery, Gospel Oak, was brought before the Stipendiary at the Wolverhampton Police-court, and formally charged with the manslaughter of Charles Morgan, Henry James Price, and George Firmstone. The prisoner was remanded until Tuesday, when he will be tried at Wednesbury. On the application of Mr. James Slater, who appeared for the defence, the accused was admitted to bail, himself in 50*l.*, and two sureties of 25*l.* each.

DEATH OF MR. J. P. BAKER, MINES INSPECTOR.—MR. JAMES PHILIP BAKER, Chief Inspector of Mines for South Staffordshire, East Worcestershire, and Cannock Chase districts, died at his residence, near Compton, on Thursday. The deceased was by profession a land surveyor and draughtsman, and, when a young man, he was regarded as a very skilled practitioner. He afterwards turned his attention to mining, and, with another gentleman, worked for a time some collieries at Wyrley, but the undertaking not proving very profitable, it was given up. Mr. Baker subsequently became mining engineer to Messrs. Barker, prior to their concern being converted into the Chillington Iron Company. While he was so acting, the Mines Regulation Act was passed by Parliament, and Mr. Baker, through the influence of several leading colliery owners in this neighbourhood, received an appointment under Government as one of the first Inspectors, his location to this portion of the mining district of South Staffordshire and East Worcestershire being considered advisable from his intimate knowledge of its circumstances and requirements. During the long period Mr. Baker has held his appointment, extending over 20 years, his duties have been very onerous, and a few years ago he found it necessary to obtain the appointment of Mr. W. B. Scott, the present Assistant Inspector, to aid him in the supervision of the district. The late Inspector has been seriously ill for some time, and death took place on Thursday. He has left a widow, but no children. On Tuesday, before resuming the enquiry into the cause of death of three men at the Gospel Oak Colliery, Mr. Hooper said he must take that opportunity of expressing the loss which the mining district had sustained through the death of Mr. Baker. Government Inspector of Mines for South Staffordshire. When the jury last met Mr. Baker was lying ill, and his place was taken by Mr. Wynne, and he (the Coroner) then spoke of the possibility of his recovery, but death, the great leveller of all, had taken him from them, and he believed this district had been deprived of an exceedingly good officer. He had had the pleasure of sitting with Mr. Baker since his election 22 years ago, and, although, possibly, he was not everyone's friend, yet he was quite satisfied from his experience of him that he was a thoroughly conscientious man, and although he did not please everyone, and he (the Coroner) would ask them what public officer could please everyone, he was quite sure he conscientiously did his duty. He thought the best proof of that was the results. When Mr. Baker was appointed he (the Coroner) had not then long been in office, and he recollected the inquest in colliery cases at that time was something like one case per week, but now he did not think they exceeded one case per month. He thought that spoke volumes for the zeal with which Mr. Baker had performed his duty, and he felt he would not be discharging his duty to his conscience if he did not state his appreciation of Mr. Baker's worth as an Inspector of Mines. He sympathised most deeply with the widow of the deceased gentleman, and he was sorry that his official duties would prevent him from attending his funeral. The Government would have to appoint a successor, and whoever he might be he only hoped he would be as zealous as Mr. Baker. Whatever he (the Coroner) knew about mines he had learned from Mr. Baker, on whose judgment he placed great reliance. They had always worked amicably together, and he had assisted in deciding some of the most important cases that had occurred in this district for years. Whoever might be appointed as Mr. Baker's successor it was not for him to say, but this much he would say, although Mr. Scott was present, that he had had the pleasure of knowing him for several years, and if any word from him could induce the Government to appoint him to the vacant office he would gladly do so. Mr. Scott was popular

both with masters and men, and he hoped he would be appointed Government Inspector for South Staffordshire.—Mr. Scott thanked the Coroner for the kind manner in which he had spoken of him.—*Wolverhampton Chronicle.*

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 8.—In the lead mining districts of Derbyshire business has been rather better, as the water has been cleared out of the mines that the heavy rains inundated. But there is no reason why mining operations should be in any way impeded by the elements, for there should be the same appliances at them as there are in the collieries. But there are laws in connection with coal mines for the safety of the miners of the most stringent character, whilst metalliferous mines are left much to the discretion of the managers and other officials. As an instance it may be stated that at all coal mines the men are let down from the surface to the bottom of the shafts by means of protected cages and steam-power. On the other hand, in the metalliferous mines there are the old-fashioned ladders, the descending of which take a good deal of the stamina out of a man, whilst the ascent after a long and laborious day's work must be in every way thoroughly exhausting. Were the same means of descending and ascending shafts of lead mines as there are at the collieries there is no doubt the men employed at the latter would be able to do a great deal more work in a day than they are now able to accomplish. So far as Derbyshire is concerned, Mr. Wass appears to be nearly alone in taking advantage of modern appliances to minimise the labour of the miners. The result, we believe, has been that the miners are able to do more work in a day, come out of the mine comparatively fresh, and able to resume their daily labours in a physically better state than would otherwise be the case.

There has been some little change in the coal trade of late in Derbyshire, for the collieries are not so well employed as they have been. The miners who have been crying out for a limitation of production, so as to enhance the price of coal, and so raise the wages of the workers, have been unexpectedly checkmated in the opposite direction to what they expected. The trade has fallen off to such an extent that at many of the mines the men can scarcely get more than five days a week, and in some instances four. The consequence is that little is now heard of compulsory means being adopted to force colliery owners to carry out the views of their workmen with respect to restriction. House coal is not in such good request as it was some time since, and there has been a falling off in the demand for the London market, which is of no ordinary importance to several of our largest colliery companies. Clay Cross has not been sending up to the average, and the same may be said with respect to the Langley Mill, Eckington, Blackwell, and others of less note. Prices, too, are not so good as they were, and the probability is that they will be lower, despite the efforts of the men to turn the tide in a contrary direction. Steam coal has been looking rather better of late; but the output is considerably in excess of the demand, which has been principally confined to railway contracts and iron making, comparatively little being sent away to any of the ports for exportation. There has been no falling off in the production of pig-iron, for the demand has kept up well since the commencement of the year. At the end of 1882 the stocks at the various works were scarcely equal to one month's production, and these have since been reduced. In manufactured iron there has been no material alteration, the output being still considerably below the power of the mills and forges. Things are looking very bad for the inhabitants of Dronfield, for it appears that the new works at Moss Bay, near to Workington, will shortly be ready for occupation, when the plant of the firm of Wilson and Cammell, but recently purchased by Cammell and Co. (Limited), Cyclops Works, Sheffield, will be removed. This will be a serious thing for the place, seeing that by the removal of the works nearly one-half of the population will have to migrate to the new quarters in Cumberland.

In Sheffield business all round has been good, although in some few of the minor and lighter branches there is not quite so much activity as there was at the close of last year. Steel makers have been busily engaged, there being a good demand for Bessemer in billets and ingots, and also for crucible and the ordinary open-hearth steel. Bessemer rails are still in poor request, although prices still rule low, being from 5*l.* 10*s.* to 6*l.* a ton. A fair tonnage of special quality of Bessemer is also being produced for certain descriptions of cutlery and tools. Crucible steel is also being extensively produced for mining appliances, as well as for wheels, axles, and springs. In the heavy departments there has been no abatement in the activity which has prevailed since the commencement of the year. Armour and other plates are being most extensively produced, and in these there is a large consumption of steel. Telegraphic and other wire is in steady request, and the mills are also running well on sheets and hoops. The leading cutlery houses continue to be well employed, the finest quality of table and other knives being in most request, there having of late been an increase in the exports to America, as well as to Australia, and other of our colonies. Edge tool makers have also been doing well, whilst there has been increased activity in the output of sheep shears for exportation. At the foundries things are looking better, more being done in pipes, stoves, grates, ranges, and palisadings than has been the case for a considerable time past. The engine works, too, have been working well of late, and there are good orders in hand by the leading firms.

The coal trade in South Yorkshire is by no means so good as it has been, and there is every appearance of its getting worse. Still, with this knowledge, the Executive of the West Riding Miners' Association still hold out for their original programme of limited production, so as to force wages up. A conference has been convened for Monday next, to be held in Barnsley, for the purpose of enforcing a struggle between the colliery owners and their employees. As it is, at several places the men are able to obtain full employment, yet those who are able to obtain six days a week appear to be eager to work only five, in the hope of shortly getting seven days' pay for it. There are, however, a good many exceptions, but these are the thoughtful men in the mining body, and form the minority, of course. They have to give way to the thoughtless and impetuous, although they well know what the result must be; but they are forced to go with the stream.

TRADE OF THE TYNE AND WEAR.

Feb. 7.—The demand for all kinds of steam coal continues steady. Sometimes there is a scarcity of tonnage, but, on the whole, the pits are well employed. Steam small coal is in better demand at improved rates. Gas coal continues to be shipped in large quantities, and the total shipments at Tyne Dock and the other principal shipping places on those rivers continue large. There is an excellent demand for coke for export, and also for local consumption, and for the Midland and West Coast markets. The difficulty at the Brandon and other large coking works of Messrs. Straker and Love, in Durham, have been happily adjusted. The strike at the Ashington Steam Coal Works, in North Northumberland, has prevented the working of coal for a few days; the putters refused to accept the award of the joint committee as to prices, an act of insubordination which is much to be deplored, but as there is no dispute between the coal hewers and masters, the latter will commence work at once, and other putters are expected to be got for the work. At the Walker Colliery, one of the oldest coal mines in the Tyne, the upper seams have been almost exhausted, and the shafts are now to be sunk to the lower measures, an operation which will cause a considerable outlay, but it is expected that valuable seams will be found, and the result will ultimately prove highly beneficial to the company. The Low Main seam, which formerly yielded the bulk of the best steam coal in Northumberland, has to a great extent been exhausted in that coal field, and the Yard seam now furnishes a considerable bulk of this coal. This seam lies above the Low Main seam. It is remarkable that so little coal has yet been discovered below the Low Main seam in Northumberland. Although in Durham there are several good seams below this seam, it is evident that at no distant date attempts must be made to reach those lower seams which may be presumed to exist, otherwise this fine coal field will be threatened with exhaustion.

The advance in the rate of the Durham miners' wages under the sliding-scale has given much satisfaction. It appears to be a small matter 14 per cent., and the advance in each miner's wages will only be small, but that little addition will amount to 50,000l. yearly. It is also probable that a further advance will take place under the scale at the end of the next quarter. This will, we believe, encourage the Durham miners to adhere to the sliding-scale, and it may also induce the Northumberland miners to attempt to establish another scale of the same kind. The proposed restriction on the output of coal continues to attract attention, but we do not suppose that the Durham miners will adopt any large measure of the kind. A curious case has arisen at the Tudhoe Colliery, where the men have refused to work on the pay Saturday, and the masters have obtained a number of summonses, and intend to proceed against the men for the offence. We do not recollect any similar case—that is, for the masters to prosecute for the absence of workmen on the pay Saturday. It has, indeed, been the custom to work the pits on this day when the demand was great, but a full day's work was seldom got or expected on such days. It is a very old custom in this trade for the miners to claim a holiday on the pay Saturday; but whether this custom will establish any right in the matter remains to be tried.

The iron trade has been in a very dull state this week, and there has been much weakness in prices, whilst there are no buyers beyond immediate wants; the reason of the present stagnation puzzles the most experienced men in the trade. The reports from the Midland and Scotch districts are, however, discouraging. The American trade is also in an uncertain condition. For the last two months there has been a marked falling off in shipping deliveries. The manufactured iron trade is very quiet, but there is little change in prices. Messrs. Connal's stock is about 90,000 tons. The attempt to restrict the production of plates in the Durham manufactured iron trade has failed. It was proposed, it will be remembered, to cease work at some of the rolling mills on Monday, but the agreement has not been carried out by all the firms, and consequently the arrangement will fall through. There has been a decided improvement in the chemical trade on these rivers; the demand for bleaching powder especially has revived, and prices for this product of the chemical trade have advanced considerably. The Board of Arbitration for the manufactured iron trade of the North of England was held on Wednesday last at Darlington; that is the annual meeting, and its report shows that it comes out of an eventful year stronger numerically. In the past year the sliding-scale was suspended, and two arbitrators decided the rate of wages. The last arbitration in November last resulted in an award under which wages were fixed "till the last day of February, 1883," subject to "one month's notice of change from either side to terminate on or after the expiration of such period." The rate of wages, as decided by Sir J. Pease, is to continue for some time. As the realised price of iron sold by associated makers shows little or no change on the past quarter from the rate that prevailed just prior to the award the wisdom of the policy of allowing matters to remain unchanged is evident. It is to be hoped too that the changes that are now being discussed in the constitution of the board will result in such action as will lead to the strengthening of the hold that it has alike on the masters and men. The board has now a long and honourable history, and as it has issued, on the whole, so triumphantly from a year that threatened its existence it may be believed that increased and widened usefulness will characterise it when such changes as the teachings of experience suggest in its machinery are made to better fit it to adapt itself to the varying phases of a fluctuating industry.

The January returns of the Cleveland iron trade shows that at the end of the month 121 furnaces were blowing, which is one more than at the end of the year: 85 furnaces were making Cleveland iron, and 36 hematite, Spiegel, and basic iron. The make of Cleveland pig during the month was 156,293 tons, which was practically the same as in December. The make of hematite was 76,036 tons, or an increase of 3546 tons. The total make of all kinds was 232,329 tons, as against 229,380 tons in December. The stocks of pig-iron show an increase of 26,823 tons. The shipments of pig-iron for the month were smaller than for many months past, but as the spring advances they will, no doubt, naturally improve. In the Cleveland iron ore mining district the mines are fully employed all round.

THE NORTHUMBERLAND COAL TRADE—THE SLIDING-SCALE.—The result of the voting of the miners on this question has been made known, and it is probable their decision will lead to a satisfactory settlement of the dispute. The miners were asked to vote on two questions—First, as to whether they should appoint a committee to meet the employers with a view to obtaining a more advantageous sliding-scale; and, second, as to whether they should ask 10 per cent. advance as the basis of a new scale. The sense of the county has been fairly taken, and the result is in favour of the first resolution, that a committee be appointed to negotiate with the masters. Representatives to sit on this committee will be nominated in the various districts, and a meeting between employers and employed may be anticipated at an early date.

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

FEB. 8.—Happily the strike of the colliers has been averted by a timely decision on their part to resume work on the old terms, and thus the attempt to which they have been egged on to interfere with the working of the business of their employers has, for the present, been frustrated. The stone quarrying trade in the Ruabon district is rather depressed just now, and sales of plant on two quarries on the property of Mr. Whalley, M.P., take place to-day. Neither is the slate trade good at present. At the large quarry of Cilgwyn, in Nantlle, over 100 men are being discharged, and it is anticipated that a reduction in the number of days worked will be made at the Penrhyn Quarries. The slate district of Corhyss also suffers from the depression. Of lead mines the least said is the better until prices get up. Liquidation seems the order of the day in Carnarvonshire and Cardigan. It may be regarded as the winter solstice in lead mining, but the days will lengthen and brighten before long.

From Penryn to Pwllheli we make a journey down one side and up the other of the promontory of Lleyn. On our journey south towards Nevins we pass numerous quarries in syenite and greenstone—all called granite commercially—and perhaps the nearest approach to granite in Wales occurs along this part of the Welsh coast. The chief of these is Talharan, from which perhaps the largest trade is done in Wales. There are many others which about a year ago I mentioned particularly. South of Nevins is the fine bay of Porthdinlleyn, in which a whole navy might safely ride at anchor. The whole coast hereabouts is dotted with pleasant little houses by sea captains who here rest from their labours.

Further south is the lead mining district of the Tanybwch, Assheton and other mines which recently have had a good run of success. Then we turn north-eastward to Pwllheli, where in the Gimlet Rock there is another important paving set quarry. We halt at the Crown, and have a long yarn with the Spargos, who are ever ready to communicate mining and quarrying information, and then we take the train to Portmadoc. On our left up in the recesses of the mountains is the only partially developed slate district of the Prince of Wales and the Gorsedda Quarries, with its 12 miles of narrow gauge railway, and where, doubtless, some day a good trade will be done. Connected with the Gorsedda Quarry there is perhaps the largest and best built machine-house in Wales. Nearer Portmadoc on the hill side on our left we see what might be important set quarries, and which are well equipped for working, and on our right hand are the no less important stone quarries of Moelygest. So we arrive at Portmadoc, and take up our quarters at the Sportsman's Hotel. Then we saunter along the well arranged slate quarries and wharves, we watch the process of loading, we notice the difference in colour and thickness of the slates here—bluer and thinner than those of Carnarvon. We see the loaded trains of slate coming down the 2-foot gauge line from Festiniog, 10 miles off. We turn into the foundry of Messrs. Williams and Son near the quay, and then we find rest and refreshment at the Sportsman.

On Saturday, Mr. Justice Chitty made orders for the compulsory winding-up of the Estate and Building Improvement and Investment Company, the North Wingfield Colliery Company, and the Capital Fire Association.

PROVINCIAL STOCK AND SHARE MARKETS.

CORNISH MINE SHARE MARKET.—Mr. J. H. REYNOLDS, stock and sharebroker, Redruth (Feb. 8), writes:—Business has been very much restricted, in consequence of the statement afloat that the lord of the mine has demanded 40,000l. for the renewal of the Dolcoath lease, and has had a prejudicial effect on the price of the shares which have receded to 53, but close somewhat better at 55. Other shares have also suffered in consequence. Subjoined are the closing quotations:—Blue Hills, 3½ to 1; Carn Brea, 7 to 7½; Cook's Kitchen, 33 to 34; Dolcoath, 55 to 56; East Pool, 48½ to 49; Gunnislake (Clitters), 2½ to 2¾; Killfret, 2½ to 2¾; Mellanear, 3½ to 4½; New Cook's Kitchen, 5½ to 6; New Killy, 2 to 2½; Pen-an-drea, 2 to 2½; Phoenix, 2½ to 2¾; South Condurow, 9 to 9½; South Crofty, 9 to 10; South Frances, 7½ to 7¾; South Tolarne, 4 to 5; South Penrithal, 3½ to 3¾; Tincroft, 6 to 6½; Tregebo, 3 to 3½; West Basset, 6 to 6½; West Frances, 6 to 7; West Killy, 9½ to 10½; West Pevor, 5½ to 6; West Polidice, 1½ to 1¾; West Seton, 15 to 16; West Tolarne, 12½ to 13; Wheel Agar, 16 to 16½; Wheel Basset, 7 to 8; Wheel Grenville, 7 to 7½; Wheel Hony and Trelawny, 2 to 2½; Wheel Killy, (St. Agnes), 1 to 1½; Wheel Pevor, 3½ to 4; Wheel Ury, 4½ to 5; East Ury, 4½ to 5.

—Mr. J. S. DAVEY, mine shareholder, Redruth (Feb. 8), writes:—Our market has been unsettled this week by rumours respecting the terms of Dolcoath lease, and prices ran down 9 from last week's quotation. Other shares also declined; Cook's Kitchen, 2, East Pool, 1, Killfret, ¼, South Crofty, 1, West Killy, 2, West Basset, ¾, and Wheel Agar, ½. To-day market is inactive, but there is more demand for Dolcoath and West Killy at prices slightly above those of yesterday. Closing quotations herewith:—Blue Hills, 3½ to 1; Carn Brea, 6½ to 7½; Cook's Kitchen, 32 to 33; Dolcoath, 55 to 56; East Blue Hills, 3½ to 4½; East Pool, 48 to 49; East Ury, 4½ to 5; Killfret, 2½ to 2¾; Mellanear, 4½ to 5½; New Cook's Kitchen, 5 to 6; New Killy, 2 to 2½; Pen-an-drea, 2 to 2½; Phoenix, 2½ to 2¾; South Condurow, 9 to 9½; South Crofty, 9 to 9½; South Penrithal, 3½ to 3¾; South Tolarne, 4½ to 5½; South Wheel Frances, 7½ to 7¾; Tincroft, 6½ to 6¾; West Basset, 6 to 6½; West Frances, 6½ to 6¾; West Killy, 9½ to 10½; West Pevor, 6 to 6½; West Polidice, 1½ to 1¾; West Seton, 15 to 16; West Tolarne, 12½ to 13; Wheel Agar, 16 to 16½; Wheel Basset, 7½ to 7¾; Wheel Grenville, 7 to 7½; Wheel Pevor, 3 to 3½; Wheel Killy, 1½ to 1¾; Wheel Ury, 4½ to 5; Wheel Coates, 3½ to 4.

—Messrs. ABBOTT and WICKETT, stock and share brokers, Redruth (Feb. 8), write:—The market has been disorganised, on account of the terms demanded by Mr. Basset for the renewal of Dolcoath lease, and at times there has been a great desire to sell these shares almost at any price, but to-day a better feeling is predominant. Subjoined are the closing quotations:—Blue Hills, 3½ to 1; Carn Brea, 7 to 7½; Cook's Kitchen, 33 to 34; Dolcoath, 55 to 56; East Pool, 48½ to 49; Killfret, 2½ to 2¾; New Cook's Kitchen, 5 to 6; New Killy, 2 to 2½; New Trumpet, 1 to 1½; Old Gunnislake, 4½ to 5½; Pen-an-drea, 2½ to 2¾; Penhall, 3½ to 4½; South Condurow, 9½ to 9¾; South Crofty, 9½ to 10; South Frances, 7½ to 7¾; Tincroft, 6½ to 6¾; West Basset, 6 to 6½; West Killy, 10 to 10½; West Pevor, 6 to 7; West Frances, 6½ to 6¾; West Seton, 15 to 16; West Tolarne, 12½ to 13; Wheel Agar, 16 to 16½; Wheel Basset, 7 to 7½; Wheel Grenville, 7 to 7½; Wheel Killy, 1½ to 2; Wheel Pevor, 3 to 4; Wheel Ury, 4½ to 5.

—Mr. M. W. BAWDEN, Liskeard (Feb. 8), writes:—The mining market for shares in the Camborne district has experienced a regular panic, and business almost suspended, owing to the heavy premium about to be exacted from the Dolcoath Mining Company for a renewal of lease, and shares have receded 15l. a share during the week; most other mines held by the same proprietors are also offered at lower rates in sympathy with this unexpected demand. A meeting is called for Tuesday next, when it is to be hoped satisfactory terms will be acceded to by the lord, as it involves a serious question for the future. Herodfoot, Marke Valley, Phoenix United, and Wheel Ury enquired for. Subjoined are the closing quotations:—Blue Hills, 3½ to 1; Carn Brea, 7 to 7½; Cook's Kitchen, 32½ to 33; Dolcoath, 50 to 51; Devon Consols, 5 to 5½; Devon Great United, 4½ to 5; East Caradon, 1 to 1½; East Pool, 4½ to 5; Gawton United, 4½ to 5; Glasgow Caradon, 4½ to 5; Gunnislake (Clitters), 2½ to 2¾; Herodfoot, 3½ to 4; Hingston Down, 3½ to 4; Killfret, 2½ to 3; Marke Valley, 3½ to 4; New West Caradon, 4½ to 5; North Herodfoot, 3½ to 4; Old Gunnislake, 4½ to 5; Phoenix United, 3 to 3½; Price of Wales, 3½ to 4; South Caradon, 28 to 29; South Condurow, 9½ to 9¾; South Crofty, 9 to 9½; South Devon United, 4½ to 5; South Frances, 7½ to 7¾; Tincroft, 6 to 6½; West Basset, 6 to 6½; West Caradon, 1 to 1½; West Killy, 11 to 11½; West Pevor, 15 to 16; West Phoenix, 4½ to 5; West Seton, 16½ to 17; Wheel Agar, 16 to 16½; Wheel Basset, 7½ to 7¾; Wheel Crebor, 2 to 2½; Wheel Grenville, 7½ to 7¾; Wheel Hony and Trelawny, 1½ to 1¾; Wheel Killy, 1½ to 1¾; Wheel Jane, 3½ to 4; Wheel Pevor, 3½ to 3¾; Wheel Ury, 5 to 5½.

—Mr. JOHN CARTER, mine shareholder, Camborne (Feb. 8), writes:—The market has been dull throughout the week for the sale of mine shares generally, few buyers are to be found, and prices are consequently lower. There can be no question now that Mr. Basset's demand is 40,000l. for Dolcoath for the renewal of the lease, to be paid out of the profits, and is also to be a new shaft sunk. The extension of the market has consequently been no way abated. Shares have been forced down to 53, but close at 55. Closing quotations are annexed:—Carn Brea, 6½ to 7½; Cook's Kitchen, 31 to 33; Dolcoath, 55 to 56; East Pool, 48½ to 49; Killfret, 2½ to 2¾; Mellanear, 3½ to 4; New Cook's Kitchen, 5½ to 6; New Killy, 1½ to 2; Pen-an-drea, 2 to 2½; South Condurow, 9½ to 9¾; South Crofty, 9 to 10; South Frances, 7½ to 7¾; Tincroft, 6½ to 6¾; West Basset, 6½ to 6¾; West Frances, 6 to 6½; West Killy, 10 to 10½; West Pevor, 5 to 5½; West Polidice, 25s. to 30s.; West Seton, 15 to 17; Wheel Agar, 15½ to 16½; Wheel Basset, 7½ to 8; Wheel Grenville, 6½ to 7; Wheel Killy, 1½ to 1¾; Wheel Pevor, 3½ to 4; Wheel Ury, 4½ to 5.

MANCHESTER.—Messrs. JOSEPH R. and W. P. BAINES, share-brokers, Queen's Chambers, Market-street (Feb. 8), write:—There are very few events of moment to record for the past week, and only a moderate amount of business has been concluded. Beyond the fluctuations in one or two stocks speculative securities do not show any decided change in value, nor is there any instance in which marked activity, along with decided movement, has occurred. Mexican railway stock has been freely dealt in at varying prices, and, comparing last week's values with those at close to-day, the recent rise is very fairly maintained, figures only showing a fractional decline. Foreign funds rule sluggish, but with only small alterations in prices quoted. The movements in the markets for the other descriptions of investments reported upon are contradictory, and are not sufficiently one-sided to denote a general feeling in either direction. In many cases, Lancashire and Yorkshire keep very steady, and sellers have put their quotation up ½, though without a corresponding advance on the part of buyers. Union Bank of Manchester have found buyers ½ better, sellers remaining unmoved. The distinct changes are:—Higher: Liverpool Commercial, ½; and Oldham Joint Stock, ¼. Lower: Manchester and Salford, ¾; and Consolidated, ¾.

Insurance shares continue slow of sale, but we have to record this week a preparation of quotations in quotations in favour of holders, though there is no instance of decided advance. Higher: Boiler Insurance and Steam-power, ¼ to ½; Lancashire and Yorkshire Accident, ¼; Manchester Underwriters, ¼; National Boiler, ¼; Queen, ¼; and Reliance Marine, ¼. Lower: Royal Liverpool, ¼; and Thames and Mersey Marine, ¼.

COAL, IRON, AND MINING.—Iron trade advice does nothing to stimulate the market generally, and continues in a very lifeless condition. Prices have not been altered to any great extent, but the majority of changes are adverse. The most prominent is in the United States Rolling Stock, the two former being better, and the latter two lower. Bolckows have changed hands a few times at prices lately ruling, and quotations are unaltered. Ebbw Vale only dealt in twice, and although the latter dealing realised a rather better figure on the week, they are a fraction easier. Canadian Copper and Sulphur are dull and lower. Tharsis Sulphur and Copper, on the other hand, made a slight recovery. Higher: Cammell's, 2 to 3; Parkgate Iron, 1 to 1½; Tharsis Sulphur and Copper, ¼ to ¾; and Great Laxey Lead mine, ¼. Lower: A. Knowles and Sons, 1 to 1½; United States Rolling Stock, 1; Telegraph Construction and Maintenance, ¼; Llynvi and Ogwen, ¼; John Brown's, ¼; Chillingham, ¼; Indian Glenbrook Gold, ¼; Indian Phoenix Gold, ¼; Indian Trevelyan, ¼; Tredegar Coal, &c., B, ¼; Ebbw Vale Steel, &c., ¼; and Canadian Copper, &c., ¼.

COTTON SPINNING.—Prices keep generally steady, and in some cases enhanced values are obtainable; but in the majority of instances sellers find it very difficult to obtain any advance worthy the name, whilst buyers, excepting in cases of pressed sales, find holders hard to deal with. In these circumstances not much business is got through.

Telegraph wires, without producing any but a single transaction in Anglo deferred, are generally better. Anglo ordinary being ¼; do, deferred, ¼; do, preferred, 1; Direct United States Cable, ¼; and Globe Ord., ¼ to ½ higher. TELEPHONES have improved somewhat; Uniteds, though not finishing at their best, have advanced on the decision of the lawsuit in their favour. Lancashire and Cheshires have gradually gone better, and are now 1s. 3d. to 1s. 6d. better than a week ago. CORPORATION STOCKS, &c., quite firm, and further advance is marked in Leeds stock. Bradford Debentures are also ¼ better. In CANALS only Rochdale shows any movement, but this is a gain of 2s. to 2½ per share. MISCELLANEOUS quiet. Westhams have regained their late fall, but Rylands have fallen ½. Liverpool and Manchester Plate Glass are quoted ¼ lower again. Southport Trams are ¼ to ½ higher; and Manchester Carriage and Trams (B) buyers ¼ up.

RAILWAYS.—During the week there has been a drooping tendency, and prices exhibit in some instances a heavy decline. Traffics have not come up to expectations, and the money market being rather harder, these influences together causing the depreciation in values. There is, however, a better tone manifested this afternoon, and prices are stronger at the close. Canadians show more steadiness on the trade announcement to-day. Americans are in an unsettled state, and prices show a distinct falling off all round.

NEWCASTLE-ON-TYNE STOCK EXCHANGE.—Mr. FARADAY SPKNE, stock and share broker, Grey-street (Feb. 18), writes:—Most of our local iron companies' shares are lower this week, but buyers still hold off, owing to the unsatisfactory state of that trade. Barrow Steel ordinary shares, 11½ to 12, and preference, 10½ to 10¾. Bode Metal and Chemical shares have been done at 17, at which there is still buyers. Bolckow, Vaughan, and Co.'s 20l. paid shares, 24½ to 25; 12l. paid, 13½ to 14; and 5 per cent. preference, 20½ to 21. Consent Iron shares have been done at 24½, ex div. (a fall of ¾), at which they are still offered. Consent Spanish Ore shares are in good demand, at 43s. 6d., ex div. No sellers. John Abbott and Co.'s shares are wanted at 40. Palmer's Shipbuilding and Iron Company's B shares have been done at 20, which they are still wanted. A share is offered at 29½. West Cumberland Iron and Steel shares have been done at 11, at which they are still offered. Green Hurth Mine shares are in demand, at 7½; sellers at 7¼. Hexham and Edmondshyers Mine shares have improved

this week from 10s., 12s. 6d. to 20s., 25s. Tharsis Sulphur & d Copper 10l. paid shares are 34½ to 34¾; and 7l. paid, 28½ to 29¾.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, stockbroker and ironbroker (Feb. 8), writes:—During the past week markets have been dull, as often occurs at this season of the year. Trade does not appear to be progressing as favourably as expected, although the Board of Trade returns for January are on the whole satisfactory; but as the prices of most products are very moderate and the money market easy, there is every reason to expect that the active spring activity will set in about next month.

In shares of coal, iron, and steel companies the movements for the week are rather unfavourable; but not to any serious extent. In the Scotch pig-iron market the price of warrants has further declined from 47s. 11d. to 47s. 1½d., owing to large holding being thrown on the market, accompanied by unfavourable political rumours, and statements that the Middleborough ironmasters' combination for reducing production is to be broken up. Business, however, is very quiet at present, and next month, which is generally the brightest one of the year in the iron trade, will show whether these rumours are well founded or not. The present price is undoubtedly below the cost of production, so a rally is very probable as soon as prospects look a little more cheering. Chapel House Colliery are at 7s. 6d. to 12s. 6d.; Denton Colliery (A.), 10; Glynwille Colliery, 40s.; Llynvi and Tondy (pref.), 7s.; Richards and Co. (pref.), 10; and West Cumberland, 10½ to 11½.

In shares of foreign copper and lead companies prices are firm, and the copper market shows a slight improvement. Tharsis have advanced from 33½ to 34½; Bratsbergs are at 35s. to 40s.; Hornachos, 4 to 5; Pierrefite, 10s. to 15s.; Senteins, 12s. 6d. to 15s.; and Soubach and Catir Alai (Debentures), par.

In shares of home mines business has been dull. Some shares one cannot sell at all, and when there are buying orders prices are generally so low that holders do not care about parting with them. Carn Camborne are at 12s. 6d. to 15s.; Drakewells, 7s. 6d. to 12s. 6d.; East Wheel Rose, 25s.; East Devon Consols, 22s. 6d. to 27s. 6d.; East Gravel Moor, 5s. to 7s. 6d.; East Chiverton, 15s. to 25s.; Frognocks, 2 s to 25s.; Grover Consols, 3s. 6d. to 5s.; Great Polgoth United, 5s. to 7s. 6d.; Gunnislake (Clitters), 4s. to 5s.; Grosvenors, 10s. to 15s.; Gobbett Tin, 17s. 6d.; Great Wheel Worthy, 10s. to 15s.; Groves, 15s. to 20s.; Herodfoot, 7s. to 9s.; Hingston Down, 7s. to 9s.; Indian Queens, 3s. 6d. to 5s.; Killfret, 6 s to 8 s; Killy Hills, 5s. to 10s.; Marke Valley, 12s. 6d. to 17s. 6d.; Mulberry 20s. to 25s.; New Terras, 7s. 6d. to 10s.; Old Price herds, 20s. to 22s. 6d.; Parkas, 5s. to 10s.; Pelv Wood, 2s. 6d. to 5s.; Silver of Wales, 7s. to 9s.; Silver Hill, 7s. 6d. to 10s.; South Darren, 12s. 6d. to 17s. 6d.; South Crebor 3s.; Tamar, 10s. to 15s.; Treasvans, 13s. 6d. to 16s. 3d.; United Van Consols, 2s. 6d. to 5s.; Walkham, 17s. 6d. to 18s. 3d.; United Van Consols, 2s. 6d. to 5s.; West Lishburne, 11s. 3d.; West Gogginan, 20s. to 22s. 6d.; West Killy, 10s.; Wheel Ury, 10s.; Wheel Hony and Trelawny, 40s. to 45s.; Wheel Jane, 10s.; Wheel Sisters, 15s. to 20s.; York and Lancaster United, 25s. and Ystwith, 2s. 6d. to 5s.

In shares of gold and silver mines Richmonds are steady, about 7½, but Scottish Pacifics have declined 1½. Chile (Gold) Debentures are unaltered. Anankos at 7s. 6d. to 10s.; Cankim Bamoo, 5s. to 7s. 6d.; Cedar Creek 1s. 6d.; Central Wynad, 5s. to 7s. 6d.; Dieu Donne, 2s. 6d.; Denver Gold 3s. 6d.; Eureka (Nevada), 2s. 6d.; Flagstaffs, 2s. 6d. to 3s. 6d.; Flavia 6s. 6d.; Great Southern of Mysore, 3s. 9d.; Gold Coast, 17s. 6d. to 20s.; Guinea Gold Coast, 10s. to 15s.; Isabelle, 7s. 6d. to 12s. 6d.; Indian Kingstons, 2s. 6d.; Indian Glenbrook, 7s. 6d. to 10s.; Indian Wentworth, 5s. to 7s. 6d.; Kananga, 14s. to 16s.; Nava de Jadrage, 2s. 6d.; New Gold Run, 4s. 6d.; New Callan, 7s. 6d. to 12s. 6d.; Oregum, 2s. 6d. to 5s.; Port Phillip, 2s. 6d.; Rio Grande do Sul, A, 37s. 6d., ditto, B, 21s.; Silver Peak, 2s.; Simons' Reef, 1s. 3d.; Vassau, 15s. to 20s.; West African Gold, 40s.; and Yuba River, 22s.

In shares of oil and miscellaneous companies the principal feature has been a sharp decline in oil shares. Home Mines Trust are at 20s. to 25s.; and Laves Chemical, 5½ to 6½.

EDINBURGH.—Messrs. THOMAS M'ILLER and SONS, stock and share brokers, Princes-street (Feb. 7), write:—The markets markets since Wednesday last have been decidedly flat. In home railways, Caledonian has declined from 110½ to 108½; Great North of Scotland from 55½ to 54½; North British from 103 to 101½; Edinburgh and Glasgow from 40½ to 39½. In Canadian and American, Grand Trunk has fallen from 28 to 27½; the Third Preference, from 61½ to 60½; Great Western from 16½ to 16; New York, Pennsylvania, and Ohio, from 24½ to 23½. In India, from 57½ to 55½; the second from 20½ to 19½; Eries from 40½ to 39½. Readings from 28½ to 27½. In mines, Arizona Copper, which stood a week ago at 10½, after a good deal of fluctuation, and after dropping to 8s. 6d., are now at 9s. Rio Tinto warrants have risen from 22 to 22½; Tharsis from 34 to 34½. In oil shares, Burntisland have gone from 17½ to 17; Midlothians have fallen from 11½ to 10; a large business was done in these to-day. Young's Paraffin have declined from 13½ to 13; Uphalls are ¼ higher, at 10½. In banks, Clydesdale have changed from 25½ to 25; Commercial from 55½ to 55½; National from 318 to 315; Royal from 220 to 218½; Union from 24½ to 23½. In insurance, English and Scottish Law have risen from 6l. 17s. to 6l. 17s. 6d.; North British and Mercantile from 29½ to 30; Scottish Imperial from 22s. to 24s. 6d. and Life Association have receded from 25½ to 25¼; Scottish Union, A, from 57s to 56s. 6d.

IRISH MINING AND MISCELLANEOUS COMPANIES SHARE MARKET.

CORK.—Messrs. J. H. CARROLL and SONS, stock and share brokers, South Mall (Feb. 7) write:—There was little or no change in prices to-day. Great Southern were done at 11½, and Midlands at 8½. Bandon also changed hands at 8½, and Macrooms at 5½. National Banks were done at 23½, and Munsters at 6 15-16ths. Nothing done in Provincials or Hibernians. Dublin Trams are 9 15-16ths to 10, and Cork Steam Packets 11½ to 11¾. Lyons shares asked for at 5½, and Dalys were done at 2½. Gouldings offered at 8½, and Levys at 5½. Gresham Hotels remain 3½.

AUDIBLE SIGNALS FOR PREVENTING RAILWAY ACCIDENTS.

In these days when railway accidents are by no means rare of occurrence it is not surprising that inventions crop up in the endeavour to render the safety of the travelling public more to be relied upon. The name of these inventions is legion; but nearly, if not completely all, nullify themselves by the extreme intricacy of their working rendering them almost impracticable. It is, therefore, the more pleasing to notice one whose peculiar recommendation is its simplicity and inexpensiveness, and which is being introduced by Mr. J. WHITE, of the Spa Store, Bermondsey, who claims to have succeeded in producing an apparatus which will give direct from the signal box an unmistakable warning to the driver of a train. It is more especially intended for foggy weather; but would be equally efficacious at any time, and would doubtless prove a valuable adjunct to the present means of signalling on the Underground Railway.

At the centre of one or other end of the engines Mr. White mounts a vertical rod carrying a pulley or roller at its lower end. Between the two rails of the line of railway is mounted an incline, which when the bell or gong upon a passing engine is to be sounded is brought into position centrally between the rails so that the roller on the rod may strike against and ride up the incline, and the rod being thereby lifted may cause the bell or gong upon the engine to sound. The rod carrying the roller acts when lifted through an interposed spring upon a lever carrying a hammer by which the bell or gong is to be struck. Another spring afterwards forces back the rod and lever to their normal positions, this spring also serves as a buffer to arrest the momentum of the rod when moved upwards by the incline, which may be brought into a central position, between the rails or be moved away from this central position, either by making the block upon which the incline is formed to slide to and fro upon rods fixed horizontally at right angles to the rails or the block upon which the incline is formed may be mounted upon a horizontal axis, which is parallel with the rails, so that it can be turned downwards out of the way or be lifted to make it stand upright in a central position.

In either case movement may be given to the blocks by means of a bell crank lever to which an ordinary signal wire leading from the signal cabin is connected, so that by the movement of a signal lever in the signal cabin the incline may be brought into its central position or be moved from it. A weight may be used to move the incline away from its central position and to keep the signal wire taut. He also provides for each signal station three separate inclines at distances apart from one another—one for the distance signal and two for the home signal. He provides also at the signal cabin two large bells or gongs sounding different notes, one for the up and the other for the down line, and by blows on one or other of these, the signalman may intimate to the engine driver when the line is clear for him to proceed. The number of blows on the signalman's bell or gong will indicate the line to which the signal applies, and will be answered by the engine driver with the same number of whistles. As the invention could be tested with the utmost facility, and without interfering with any of the existing arrangements of the railway, it is much to be hoped that it will at once receive attention.

Registration of New Companies.

The following joint-stock companies have been duly registered—
STEAMSHIP RICHMOND HILL COMPANY (Limited).—Capital 50,000l., in shares of 100l. To carry on a shipowner's business in all branches. The subscribers (who take one share each) are—W. H. North, Liverpool; R. G. Allan, Liverpool; J. H. Allan, Liverpool; A. Allan, Liverpool; T. Glaister, Bolton; W. B. Hill, Rock Ferry; T. R. Greenfields, Liverpool.

CHINA AND JAPAN TELEPHONE COMPANY (Limited).—Capital 20,000l., in shares of 10l. The exclusive privilege of establishing and working the telephone in those countries. The subscribers (who take one share each) are—G. E. Gourand, Upper Norwood; W. G. Hall, Streatham Hill; J. L. Cooke, 5, Raymond's Buildings; H. A. Yentsch, Clapham; J. Byles, 26, Tavistock-street; R. S. Cuff, Tottenham; G. Newington, East Dulwich.

THE OTTO COMPANY (Limited).—Capital 15,000l., in shares of 5l. To manufacture, buy, sell, and deal in velocipedes generally, and in connection with a certain patent. The subscribers (who take one share each) are—S. U. Hunwicke, 13, Bruce Grove; J. G. Gros-smith, 32, Newgate-street; J. F. Peasgood, Highbury; S. G. Buchanan, St. Mary Cray; J. M. Burton, Wood Green; G. S. Newte, Hampstead; F. S. Hunwicke, Tottenham.

THE VELOPLASTIC COMPANY (Limited).—Capital 100,000l., in shares of 10l. To acquire certain patents for "improvements in the process and apparatus for manufacturing material imitating leather fabrics and the like, and also wood, stone, or other surfaces embossed or otherwise figured." The subscribers are—S. K. George, 1, East India Avenue; M. B. Snell, 2, Copthall Buildings; E. C. Blythe, 2, Copthall Buildings; F. P. Fellows, Reform Club, 500; W. Odell, 5, Great Tower-street; J. Brand, 7, Union-court, 100; F. Williams, 10, Jeffrey-square, 1.

THE PORT CAROLINE AGENCY, SHIPPING, AND LAND MORTGAGE COMPANY (Limited).—Capital 100,000l., in shares of 10l. To purchase and continue a business established in South Australia. The subscribers (who take one share each) are—A. C. MacLaren, 60, Harley-street; A. D. MacLaren, New-square; H. Cooke, Port Caroline; A. Herbert, 9, St. Helen's-place; E. L. Marshall, 9, St. Helen's-place; J. A. Hanham, 9, St. Helen's-place; G. H. Santall, 23, Red Lion-square.

MACINTYRE AND COMPANY (Limited).—Capital 100,000l., in shares of 10l. The business of builders and manufacturers of engines, boilers, and other machinery used in connection with steam. The subscribers are—J. Macintyre, Ryton-on-Tyne, 500; J. Macintyre, jun., Newcastle-on-Tyne, 500; T. C. Macintyre, Chislehurst, 500; C. E. Carr, Dunstan Hill, 500; J. A. Macintyre, Ryton-on-Tyne, 500; J. Sanderson, Jarrow-on-Tyne, 150; T. W. Spencer, Gateshead-on-Tyne, 100.

THE LIVERPOOL NITRATE COMPANY (Limited).—Capital 150,000l., in shares of 25l. To acquire certain mineral properties situated near Iquique, South America, and to explore, work, and develop the resources of such properties. The subscribers (who take one share each) are—R. R. Lockett, Liverpool; F. W. Reynolds, Liverpool; J. S. Harwood, Liverpool; R. Brocklebank, jun., Liverpool; J. Waite, Liverpool; J. T. North, Eltham; J. G. Houghton, Liverpool.

JOHN CAMMACK AND COMPANY (Limited).—Capital 50,000l., in shares of 10l. To acquire and carry on the business of mineral water manufacturers, chemists, and chemical engineers in Lancashire. The subscribers are—W. Cammack, Ormskirk, 1; J. Gandy, St. Helen's, 50; J. Mackey, St. Helen's, 1; J. W. Preston, St. Helen's, 50; J. Donnelly, St. Helen's, 50; J. Cammack, St. Helen's, 50; W. Middlehurst, St. Helen's, 10.

THE ANGLO-AUSTRALASIAN STEAM NAVIGATION COMPANY (Limited).—Capital 60,000l., in shares of 10l. A shipowner's business in all branches. The subscribers (who take one share each) are—F. Ince, St. Bennet's Chambers; R. H. Holman, 23, St. Mary Axe; A. J. Dudgeon, 112, Fenchurch-street; T. J. Taylor, 9, Fenchurch-street; W. J. Noad, 9, Fenchurch-street; W. H. Moore, East Dulwich; W. Milburn, jun., 2, 3, 4, Billiter-street.

CARDIFF AND SOUTH WALES SADDLERY AND HARNESS COMPANY (Limited).—Capital 50,000l., in shares of 10l. The manufacture and sale of leather of all descriptions, &c. The subscribers (who take 10 shares each) are—E. W. Shackell, Cardiff; D. Anthony, Cardiff; T. Williams, Carmarthen; J. E. Gunn, Cardiff; J. Ramsdale, Cardiff; J. Morgan, Cardiff; R. Price, Cardiff.

THE SWANSEA ANTHRACITE COLLIERY COMPANY (Limited).—Capital 20,000l., in shares of 10l. To purchase or otherwise acquire, hold, and work collieries, mines, minerals, and mining rights, hereditaments, and premises in South Wales and elsewhere, and in particular the Hendreforgan Colliery, situated in the Twrch Valley, Glamorganshire, comprising about 125 acres, with the buildings, stock plant, machinery, implements, and effects. The purchase consideration is 10,000l., payable 3000l. by cash; the remainder by fully-paid up shares. To carry on the usual trades of colliery proprietors, and patent fuel manufacturers, miners, smelters, engineers, and founders in all their respective branches. The subscribers (who take one share each) are—T. Cory Sketty, colliery proprietor; R. C. Furkes, Swansea, M.E.; T. R. White, Ystalyfera, C.E.; A. Bain, Ystalyfera, colliery proprietor; A. C. Jones, Swansea, accountant; C. H. Perkins, Swansea, coal exporter; A. Perkins, Swansea, commission agent. The majority of the subscribers will nominate members of the board, whose number must at no time be less than three or more than nine. Future directors will be called upon to qualify in 10 shares each.

JOSEPH STALLARD AND SONS (Limited).—Capital 150,000l., in shares of 10l. To acquire and continue a wine and spirit, distiller, and rectifier's business. The subscribers are—C. S. Howitt, Elm Bank, 100; R. W. Brooks, Edgbaston, 40; J. Dorrell, Hempsey, 40; W. Sanders, Worcester, 30; W. B. Williamson, Worcester, 15; A. S. Thorsfield, Kidderminster, 10; T. B. Burrow, Worcester, 15.

THE FIFTH STANDARD STEAMSHIP COMPANY (Limited).—Capital 21,350l., in shares of 50l. The usual business of a shipowner in all branches. The subscribers (who take two shares each) are—H. H. Halfin, Sunderland; J. Marshall, Sunderland; C. Hutchinson, Sunderland; M. Metcalf, Sunderland; J. L. Marshall, Sunderland; J. Thompson, Sunderland; H. Wrighton, Sunderland.

MILNER AND COMPANY (Limited).—Capital 30,025l., in shares of 5l. To acquire and carry on a publisher's and wholesale bookseller's business established in London and Halifax. The subscribers are—F. R. Sowerby, Halifax, 3000; J. E. Sowerby, Halifax, 3000; R. Z. Sowerby, Halifax, 1; J. F. Sowerby, Halifax, 1; J. Wilson, Halifax, 1; T. Teffany, Halifax, 1; C. Brown, Halifax, 1.

OLIVE SPINNING COMPANY (Limited).—Capital 100,000l., in shares of 100l. The business of spinning and doubling and manufacturing cotton, silk, wool, flax, and other fibrous substances. The subscribers (who take five shares each) are—B. Moores, Oldham; T. Cuthbert, Oldham; G. H. Aston, Oldham; J. Charlesworth, Oldham; E. Dyson, Oldham; T. Bolton, Oldham; T. Taylor, Oldham.

THE BENGAL BARAGUNDA COPPER MINING COMPANY (Limited).—Capital 200,000l., in shares of 10l. To acquire a certain mining property and estates situated at Baragunda, in the district of Hazaribagh, Bengal, and other estates, mining rights or hereditaments of any tenure in the same province or elsewhere, for the purpose of carrying on the business of mining, and working copper and other metals and minerals, preparing same for the market, extracting mineral products, disposing thereof, and generally that of mine-owners, metallurgists, metal dealers and workers, and any other business which may be usefully carried on in connection therewith. The subscribers are—J. Swinburne, Capheaton, Bart., 200; R. H. Saunders, 319, Norwood-road, gentleman, 200; J. F. Watson, Balam, M.D., 200; J. Byramjee, 10, Pancras-lane, M.D., 200; P. Tabb, 46, Queen Victoria-street, C.E., 50; C. Danks, 143, Evering-road, gentleman, 100; A. C. Trolman, Caterham Valley, clerk, 100. The first board comprises the following:—Sir S. S. Hogg, Sir J. Swinburne, R. H. Saunders, and F. Watson. The number must not be less than four or exceed eight. Qualification 200 shares.

THE BARAGUNDA COPPER MINING COMPANY (Limited).—Capital 120,000l., in shares of 10l. To acquire the mineral and mining rights known as the Baragunda Mine, situated at Huerta de Proven, near the town of Almado, in the kingdom of Portugal,

with the mills, ore houses, and other buildings erected thereon, plant, stock, machinery, implements, &c., the consideration of sale being 60,000l. in cash and 40,000l. fully-paid up shares. To carry on the business of winning, working, crushing, smelting, reducing, and amalgamating copper and copper ore and other ores, metals, and minerals, and of extracting, preparing, and working other ores, metals, and minerals, and of preparing same for the market. The subscribers are—E. A. Pontifex, Farrington Works, engineer, 250; J. Harvey, 5, De Vere Gardens, merchant, 250; F. D. Webb, 18, Victoria-square, gentleman, 250; W. F. Rae, 31, Holland Villas-road, barrister, 250; E. T. Booth, Tulse Hill, gentleman, 1; J. Whitehead, junior, Southwood, esquire, 1; W. R. Seymour, 21, Down-street, gentleman, 1. The first directors are Lord Richard Brown, E. A. Pontifex, J. Harvey, F. D. Webb, and W. F. Rae. Qualification 250l. of the share capital of the company. Number of directors not to exceed six or be less than three.

THE SAN GUILLERMO COMPANY (Limited).—Capital 32,757l., in shares of 25l. and 10l. Taking over the whole business and property of a land company bearing the same name, and established in connection with South America. The subscribers (who take one share each) are—G. R. Hulton, Gainsborough; J. Mackenzie, Inverness; R. Eden, Inverness; E. G. Fraser, Inverness; J. A. Wenley, Edinburgh; T. E. Verner, Malvern Wells; W. D. Freshfield, 5, Bank Buildings.

S. B. LUSH AND COMPANY (Limited).—Capital 5000l., in shares of 10l. To acquire the goodwill and carry on the business of a laundryman, curtain cleaner, dyer, and bleacher, at 2, Clapton-road, Clapton. The subscribers (who take one share each) are—A. C. Cator, Lower Norwood; V. C. Doubleday, 2, Clapton-road; E. A. James, Holmleigh; F. G. Hawkins, 48, Torrington Avenue; J. Walker, Highbury; E. H. Jenkinson, 37, Walbrook; F. H. E. Hugh, 89, Lansdown-road.

THE CONTRACT FINANCE ASSOCIATION (Limited).—Capital 50,000l., in shares of 5l. A financial business in connection with foreign, British, and Colonial grants, concessions, privileges, &c. The subscribers are—C. B. Downs, 29, Bishopsgate-street Within, 20; B. Blewitt, 120, Leadenhall-street, 20; E. E. L. Owell, 41, Threadneedle-street, 20; T. Hamilton, 2, Circus-place, 20; A. W. Travers, 13, Compton-street, 1; W. Milgad, Llandrindod, 1; J. Vizetelly, 42, Old Broad-street, 1.

THE JERSEY RAILWAYS COMPANY (Limited).—Capital 60,000l., in shares of 10l. To acquire, make, equip, work, and maintain railways from St. Hilliers to Aubin and La Morge. The subscribers (who take one share each) are—S. Norman, Uxbridge; A. M. Barnes, Camberwell; C. E. Keele, 10, Claverton-street; P. Paterson, 69, Pall Mall; G. F. Tucker, 6, Crosby-square; J. H. Mandeville, 13, Falmouth-road; E. W. Ling, Poplar.

FOREIGN STOCK MANUAL.—The Compendium of Foreign Stocks—directly issued, guaranteed, or issue authorised by foreign Governments—of which the dividends are payable in London, the price officially quoted, or stock negotiable on the London Stock Exchange, has been so long recognised as extremely useful by members of the Stock Exchange and dealers generally that it will suffice to state that the twenty-seventh edition—that for 1883—has just been issued by Mr. Effingham Wilson, of the Royal Exchange. It is, as usual, compiled by Mr. G. D. Ingall, is admirably printed, very compact (5½ in. x 3½ in. and ½ in. thick), and in every respect suited to the purpose for which it is designed.

On Saturday, Mr. Justice Fry made an order for the winding-up of the London and Provincial House, Land, Mortgage, and Investment Company, but directed that the order should not be drawn up for a week, to give the company time to arrange for the payment of the debts.

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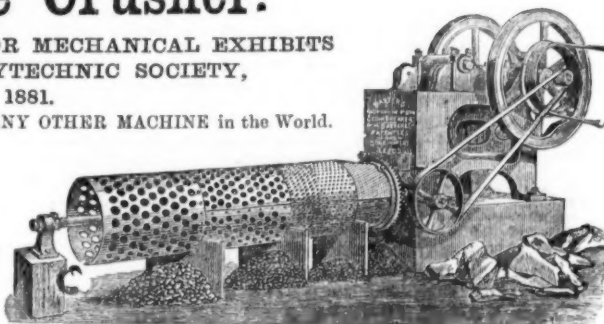
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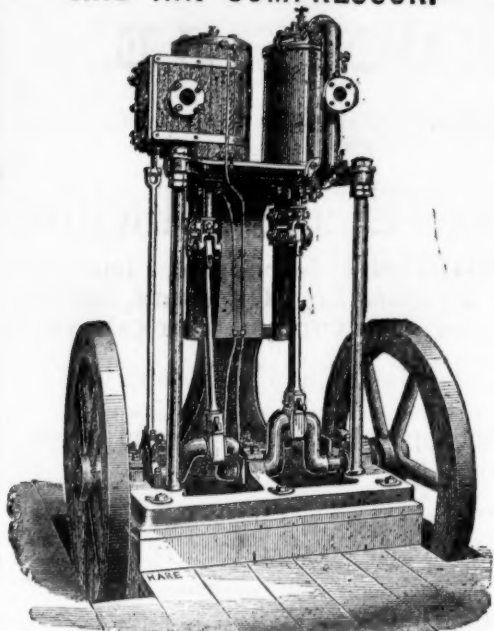
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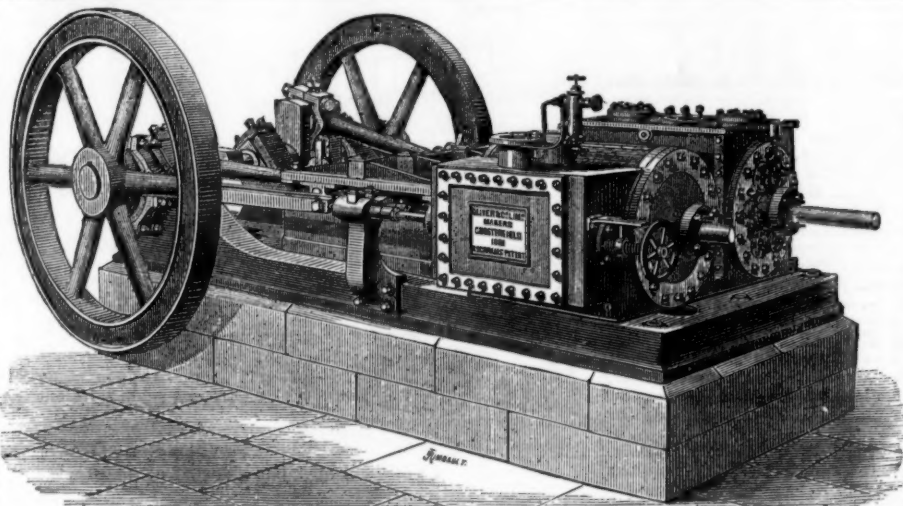
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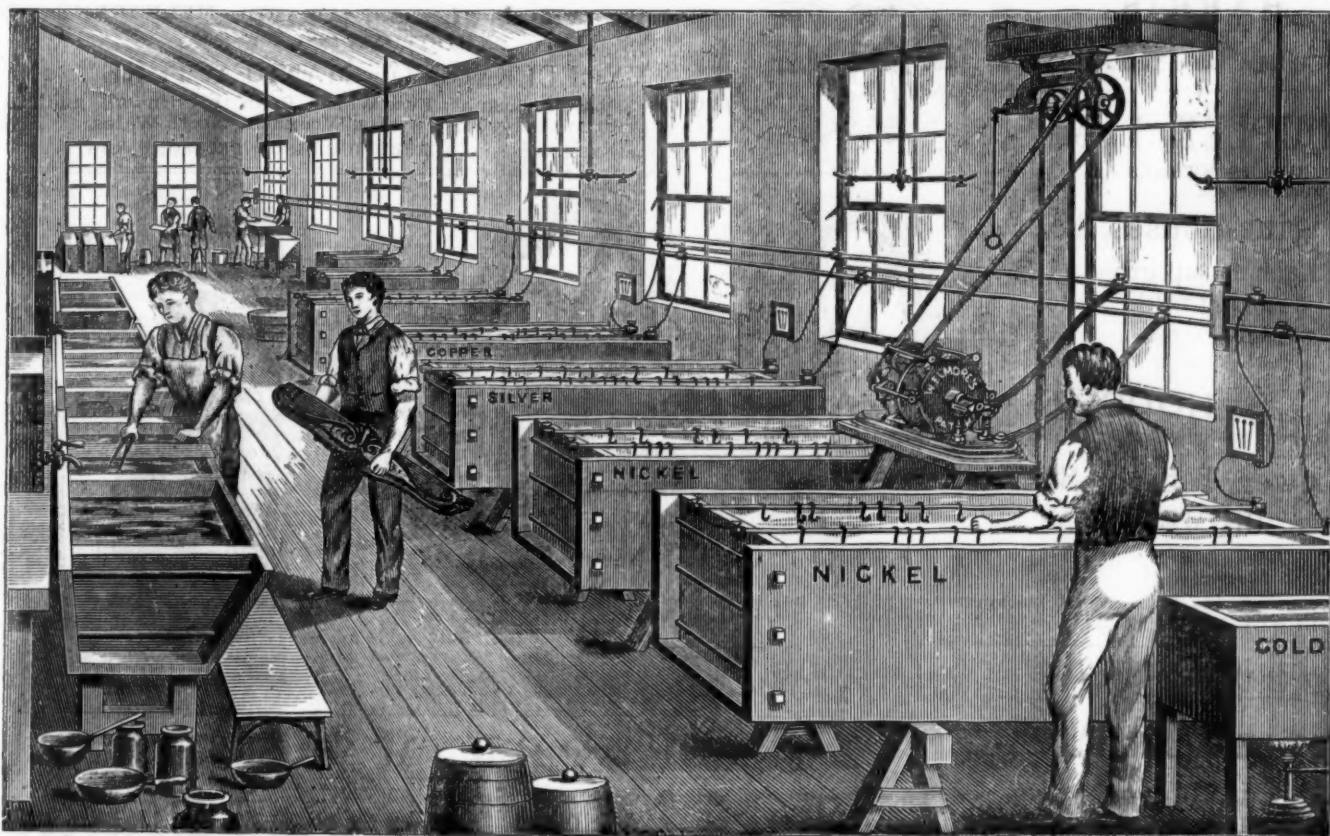
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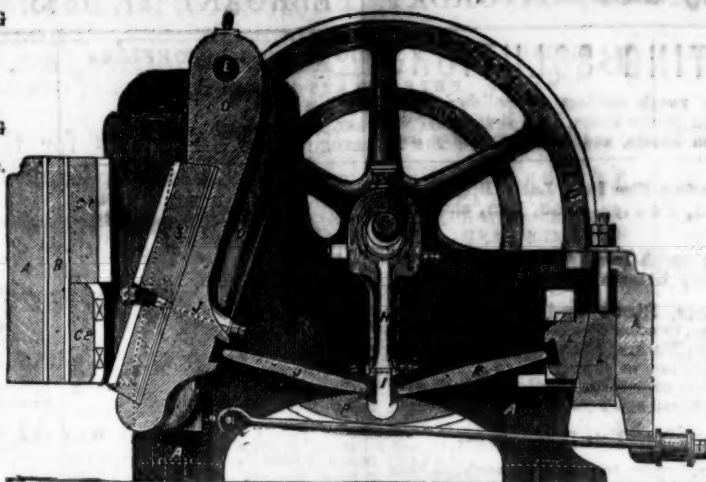
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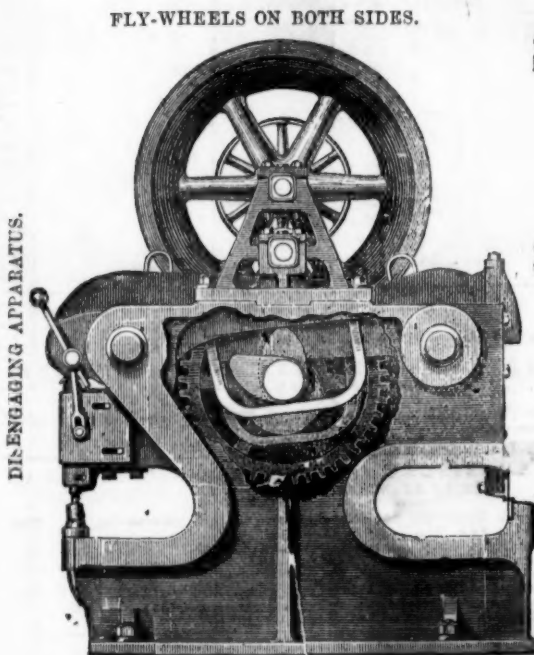
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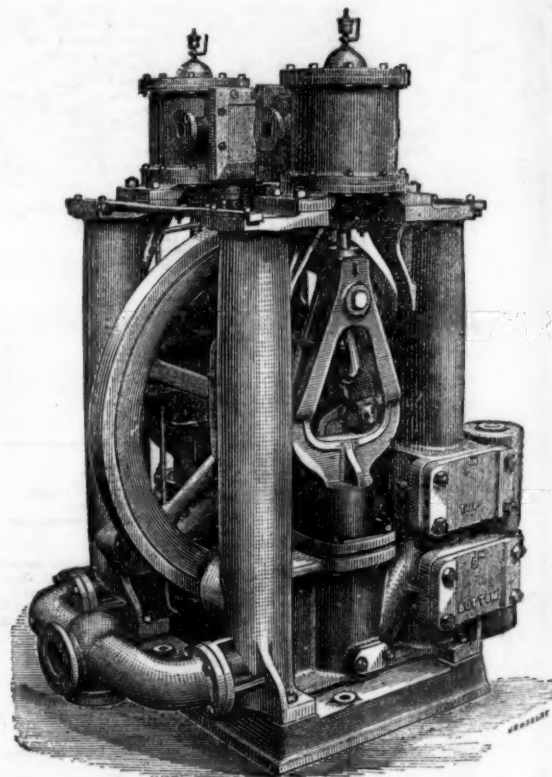
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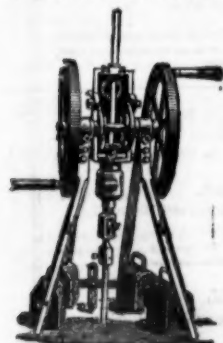
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